

UNIVERSITY OF CALIFORNIA
MUSEUM OF VERTEBRATE ZOOLOGY



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Brode, J. S.

Nevada: Mineral, Landers & Lyon Cos.

1934

1934

Zoology Field Class: June 27 - August 1, 1934
Nevada: Mineral, Lander & Lyon Co's.

Brode, J. S.

Catalog of specimens
Nos.

Itinerary

Species accounts

Brode 1934

Field Notes

taken by

J. Stanley Brode

June 26 to July 20th, 1934

for

Zoology 5125

Personel of Party

E. Raymond Hall - instruction
and Director of Party "Doc"
Ward C. Russell, care of properties,
specimens, "aid" de camp"
Dawson A. Feathers - respectfully the Cook
Students (pay customers)

J. Stanley Brode

Elton R. Edge

David H. Johnson

Fletcher G. Palmer

Brode 1934

Catalogue

2 mi SW Pine Grove, 7250 ft., Mineral Co. Nevada.

June 27, 1934

~~320~~ ♂ Eutamias minimus scrutator sent to Edge

177.5, 76, 30, 14.5, wt. 21.8g

June 28, 1934

321 ♀ Dipodomys leucogenys 297-177-46-16-wt. 78.9g. 4x1 mm Emb.

322 ♂ Dipodomys leucogenys 280-172-46-14.5-wt. 64.5g.

323 ♂ Dipodomys leucogenys 276-167-45.5-16 wt. 62g.

324 ♀ Peromyscus maniculatus 158-69-21.5-21-33.3g 5x23 mm Emb.

326 ♀ Callospermophilus lateralis 242-85-39-19^{WT} 138g.

325 ♂ Perognathus parvus 181-95-24.5-10 wt. 18g.

327 ♀ Eutamias minimus scrutator 198-89-30-14.5 wt 46.5g.

June 29, 1934

328 ♀ Dipodomys leucogenys 278-165-46-15.5-wt. 73.8g.

329 ♂ Dipodomys leucogenys 291-[169]-46-16-wt. 94.3g.
Mason Valley, 5 mi. N Pine Grove, 5200 ft., Mineral Co., Nevada

June 30, 1934

330 ♂ Perognathus longimembris 129-67-19-6 wt. 7.4g.

331 ♂ " " " " " 140-78-19.5-6 wt. 8g.

332 ♀ " " " " " 129-71-18-6.5 wt 6.6g.

333 ♂ " " " " " 130-73-20-6.5 wt. 8.3

Skull only

334 ♀ " " " " " 72-[17]-20-6.5 wt 7.1g.

Skull only

335 ♀ " " " " " 80-[20]-20-6.5-wt 7.2g.

336 ♀ " " " " " 132-73-19-7-wt. 7.7g

337 ♀ Dipodomys microps 262-155-41.5-15-wt. 62g 2x10 mm Emb.

~~338~~ Mason Valley 12 mi E Wellington 5000 ft., Lyon Co., Nevada

June 30, 1934

338 ♂ Dipodomys microps 267-157-39-15-wt 63.7g

339 Phrynosoma platyrhinos

Brooks
1934

12 mi. S Yerington, 4600 ft., W. Walker R., Lyon Co., Nevada

July 1, 1934

340 Uta stansburiana

341 Sceloporus occidentalis

342 Sceloporus occidentalis

343 ♀ Carpodacus mexicanus wt 20 g.

July 2, 1934

344 ♂ Euphagus cyanocephalus

345 ♂ Euphagus cyanocephalus wt. 66 g.

346 ♀ Cyanospiza amoena wt. 14.5 g.

347 ♂ Peromyscus truei 180-87-22-26 wt 20 g.

348 ♀ Peromyscus truei 177-89-22-26 wt. 19 g.

349 ♂ Peromyscus truei 178-82-22-25 wt. 19.5

July 3, 1934

350 ♀ Astragalinus psaltria wt. 9.5 g.

351 ? Zenaidura macroura wt. 101 g.

352 ♀ Pica pica hudsonica wt. 160 g

July 4, 1934

353 ♀ Sialia mexicana occidentalis 26.8 g.

354 ♂ Peromyscus maniculatus 161-74-20.5-18-wt 18 g.

355 ♀ Peromyscus maniculatus 160-70-20-16-wt. 17 g.

356

July 5, 1934

357 ♂ Peromyscus maniculatus 148-70-19-17-wt 16 g.

358 ♂ Reithrodontomys megalotis 144-73-17-14.5 wt. 10.3 g.

359 ♂ Perognathus formosus 187-105-19.5-12.5-wt 22 g.

360 ♀ Perognathus formosus 190-101-26-11-wt. 18.5 g.
Sent to Edge

361 ♂ Perognathus formosus 117-~~85~~-23-12-wt. 18.8 g

Brooks
1934

12 mi., S Yerington, 4600ft., W. Walker R., Lyon Co., Nevada
July 5, 1934

- 362 ♂ Peromyscus crinitus 180-91-20.5-20 wt. 17g.
363 ♀ Neotomys lepida 253-112-31-28 wt. 100g.
364 ♂ Dipodomys microps levipes 282-165-40-13- wt. 56.8g.
365 ? Petrochelidon lunifrons wt. 20.5g.
366 ♀ Cyanospiza amoena wt. 15g

July 6, 1934

- 367 ♂ Neotomys lepida 294-120-32-29 wt. 142g.
368 ♀ Pognathus ~~specimen destroyed~~ ~~145-23-9-14g.~~

6 mi., S Yerington, 4500ft., W. Walker R., Lyon Co., Nev.

July 6, 1934

- 368 ♂ Reithrodontomys megalotis 133-53-18-16-12.5g

3 mi., S Schurz, 4100ft., Mineral County, Nevada

July 7, 1934

- 369 ♂ Ammospermophilus leucurus 210-60-37-11- wt 86.5g.

July 8, 1934

- 370 ♂ Hirundo erythrogastra wt 17.5g.
371 ♂ Pognathus logginsii? 132-52 23-9- wt 17.5g.
372 ♀ Dipodomys microps levipes 235-135-40-14 wt. 53g.
373 ♂ Dipodomys merriami 232-146-36.5-14-35g.
374 ♂ Dipodomys merriami 237-142-37-13 wt. 41g.
375 ♂ Dipodomys merriami 231-137. 37.5-13 wt. 43.5g.
2 x 15 mm Embryos
376 ♀ Dipodomys merriami 232-145-36-13 wt 42g
377 ♀ Dipodomys merriami 230-135-37-11 wt 40.5g
378 ♀ Dipodomys merriami 236-140-36.5-13 wt 40.5g.
2 embryos 17mm
379 ♀ Dipodomys merriami 230-130-36.5-13 wt 46.5g
380 ♂ Dipodomys merriami 244-144-38 13 35

Brose
1934

3 mi S Schurz, 4100 ft, Mineral Co., Nevada

July 9 1934

- 381 ♂ Thomomys bottae 220-64-28-6-wt 131g.
- 382 ♂ Perognathus longimembris 138-75-19-7-wt. 8g.
- 383 ♀ Thomomys bottae 212-70-28-6-wt. 111g.
- 384 Scaphiopus hammondi
- 385 Sceloporus magister
skull only
- 386 Canis latrans
- 387 Bufo boreas
- 388 ♀ Reithrodontomys megalotis 152-74-17.5-16-11.5g
- 389 ♂ Peromyscus maniculatus 149-70-20-18 wt 12.5g
- 390 ♂ Onychomys torridus longicaudus 142-51-19-16 wt. 19.5g
- 391 ♂ Microdipodops pallidus 180-105-26-11 wt 14.5g
- 392 ♀ Microdipodops pallidus 169-100-25-9 wt 16g
- 393 ♂ Dipodomys merriami 260-150-38-13 wt 48g
- 394 ♂ Dipodomys merriami 242-140-38.5-13 wt 42g
- 395 ♀ Thomomys bottae 198-63-28-6-wt. 78g.

July 10 1934

- 396 ♂ Thomomys bottae 215-75-29-6 wt. 81g.
Cottonwood 5100
~~Lapon~~ Cañon, 8900 ft., Mt. Grant, Mineral Co., Nevada

397 July 11 1934

- 397 Sceloporus occidentalis

Lapon Cañon, 8900 ft., Mt. Grant, Mineral Co., Nevada

398 July 12 1934

- 398 Spizella breweri wt 9.5g

SW slope Mt. Grant, 10,000 ft., Mineral Co., Nevada

July 12 1934

- 399 ♂ Perognathus parvus 179-93-23-9.5 wt 17.9g.
- 400 ♀ Perognathus parvus 192-97-22-7.5 wt 15g

Brode
1934

10000 ft.,
SW slope Mt. Grant, Mineral Co., Nevada

July 12, 1934

- 401 ♀ Perognathus parvus 185-101-23-7 wt. 17.5
402 ♀ Peromyscus maniculatus 157-69-20-17.5 wt. 28.5g
403 ♂ Peromyscus maniculatus 162-74-20-17 wt. 21.8g

Cat Creek, 8900 ft., Mt. Grant, Mineral Co., Nevada

July 13, 1934

- 404 ♀ Perognathus parvus 165-89-23-7 wt 18.5g
405 ♀ Peromyscus maniculatus 165-76-20-17.5 wt. 18.5g
406 ♀ Thomomys quadratus 193-58-26-5.5 wt. 78 g.
407 ♂ Peromyscus maniculatus 158-65-18.5-16 wt. 14g.
408 ♀ Peromyscus maniculatus 147-61-19-18 wt. 13.5g.

Lapon Canyon, 8900 ft., Mt. Grant, Mineral Co. Nev.

July 13 1934

- 409 ♂ Thomomys quadratus 209-61-26.5-6 wt. 109g.
410 ♀ Thomomys quadratus 203-60-26.5-6 wt. 109.5g.
411 ♂ Thomomys quadratus 191-60-26-6 wt. 89.5g
412 ♂ Thomomys quadratus 209-68-27-6 wt 90.5g
413 ♀ Thomomys quadratus 185-55-27-5.5 wt 82g.

July 14 1934

- 414 ♂ Microtus montanus 175-52-15-18 wt 52g.
415 ♀ Microtus montanus 164-42-20.5-13 wt. 42g
416 ♂ Thomomys quadratus 217-60.5-28.5 7-12.5

Cottonwood Creek, 7900 ft., Mt. Grant, Mineral Co. Nev.

July 15, 1934

- 417 ♀ Neotomys cinereus 256-109-36-29.5 wt 96g.
418 ? Empidonax sp? wt. 11g.
419 ♂ Empidonax sp? wt 12g.
420 Bufo

Cottonwood Creek, 7700 ft., Mt. Grant, Mineral Co., Nevada

July 15, 1934

421 ♂ Piranga ludoviciana wt. 32.7g.

422 0 Sceloporus

423 ♂ Hylochelchla guttata wt 27g

424 ♀ Empidonax sp? wt 11.5g

425 ? Empidonax sp? wt 11.5g

July 16 1934

426 ♂ Hylochelchla guttata wt 27g.

427 ♀ Eutamias quadrivittatus --- -30-16-wt 45g.

428 ♂ Callospermophilus lateralis 267-82-38.5-19-wt. 181

July 17 1934

429 ♂ Thomomys quadratus 186-57-25-6 wt. 63g

E. Walker R., 5050 ft., 2 mi. NW Morgans Ranch Mineral Co. Nev.

July 18 1934

430 ♀ Horned Lark wt 29.4g

431 ♀ Pinon Jay wt 81g

432 ♂ Peromyscus maniculatus 157-72-19.5-18-wt 15.7g

433 ♂ Peromyscus maniculatus 143-59 19.5-15-wt 11.6g

434 ♀ Reithrodontomys megalotis 154-77-16.5-15-wt 14.1g.

435 ♂ Perognathus longimontis paranintinus 140-73-18.5-15-wt. 9g.

Morgans Ranch, 5100 ft., E. Walker R., Mineral Co. Nevada

July 18 1934

436 ♀ Thomomys bottae 222-66-30-6.5-wt. 103g.

July 19 1934

437 ♀ Thomomys bottae 217-78-31.5-6.5 wt. 102.5g

E. Walker R. 5050 ft., 2 mi NW Morgans Ranch, Mineral Co. Nev.

July 18 1934
438 Phrynosoma platyrhinos

E. Walker R., 5050 ft., 2 mi. NW Morgans Ranch Mineral Co. Nev.

July 19, 1934

439 ♂ Neotoma lepida 307-141-34.5-29-WT. 149.5g -

440 ♀ Neotoma lepida 240-105-29-28-WT. 74.5g

Brode 1934

Itinerary

June 27 2 mi. SW Pine Grove, 7250 ft., Mineral Co., Nevada.

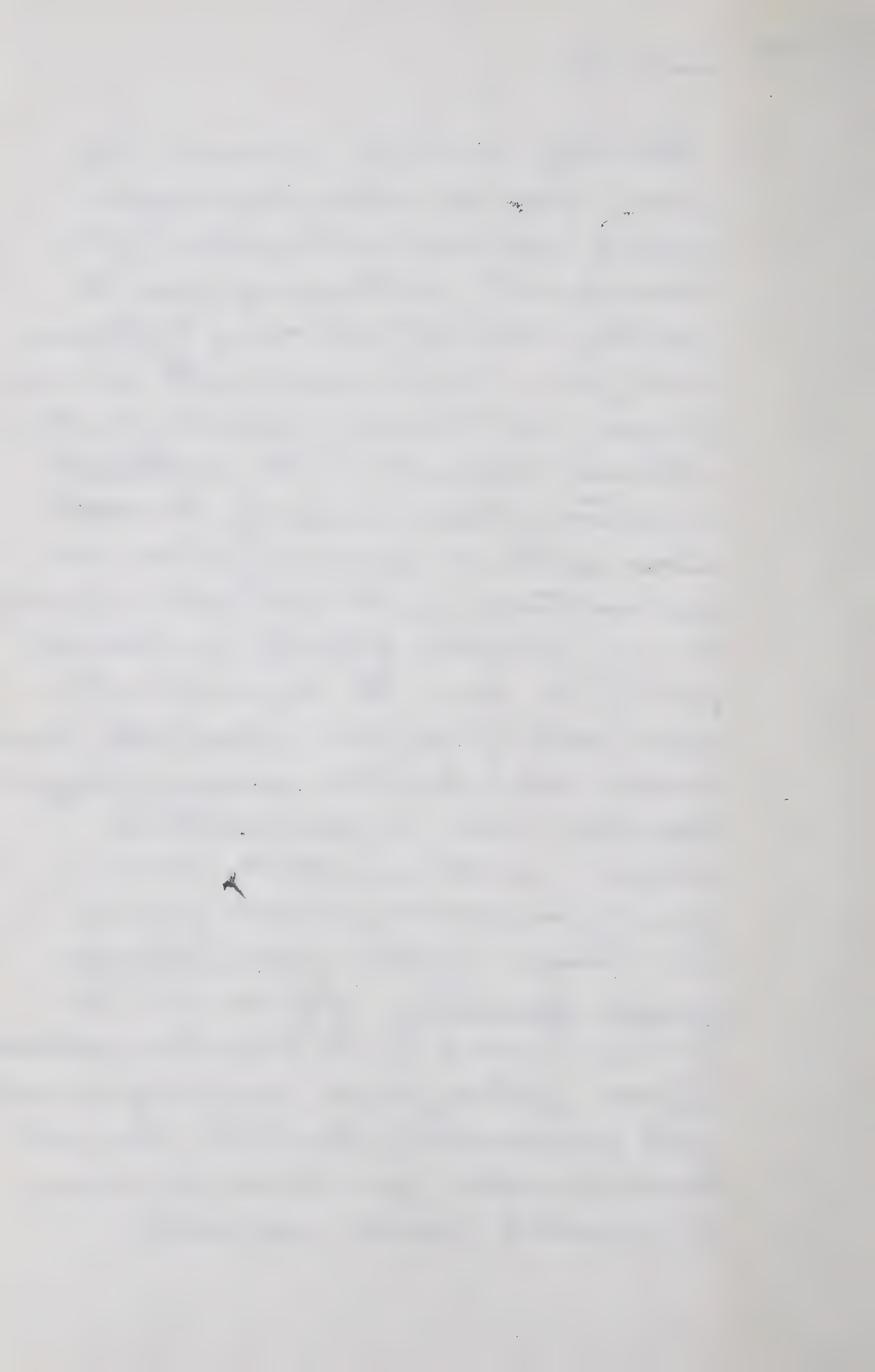
Left Berkeley, Calif., 9 A.M. June 26 1934 from Museum of Vertebrate Zoology with a party of seven in three cars. The members of the party were J. Stanley Brode, Elton R. Edge, Dawson A. Feathers, E. Raymond Hall (instructor), David H. Johnson, Fletcher G. Palmer, and Ward C. Russell.

We proceeded to the north to Carquinez Bridge, Fairfield, Davis; East to Sacramento, Placerville, Lake Tahoe and Carson City. South from Carson City, Nevada, to Minden, Gardnerville and about 15 miles further south where we camped for the night. The next morning we proceeded on to Wellington, from there we proceeded south to the Mason Valley southward to a point $4\frac{1}{2}$ mi. NE of Pine Grove, where we turned to the right up a canyon past Pine Grove to camp site as given at head of page; arrived here about 11:30 A.M.

Bradley 1934

June 27 cont.

Starting at 4³⁰ P.M. I placed a trap line down the valley, beginning at a point 500 yards north northeast of the camp site continuing down the valley but not following the stream bed for $\frac{3}{4}$ of a mile with 22 mouse traps at this point (elevation 7150 ft.), I turned sharply to the southeast I continued in a nearly straight line with 20 gov't.-mouse traps and two rat traps up the hill side $\frac{3}{4}$ of a mile to an elevation of 7450 ft. On the first part of the line the traps were set in open spots free from plant life. These areas were located among Chrysothamnus with a few scattered sages, wild currant, and an occasional piñon pine. The traps yielded one Entomias minimus scrutator before 6³⁰ P.M. The last part of the trap line extended thru piñon pines and sage brush with occasional currant. The soil had more rocks and some had signs of cracked piñon nut shells.



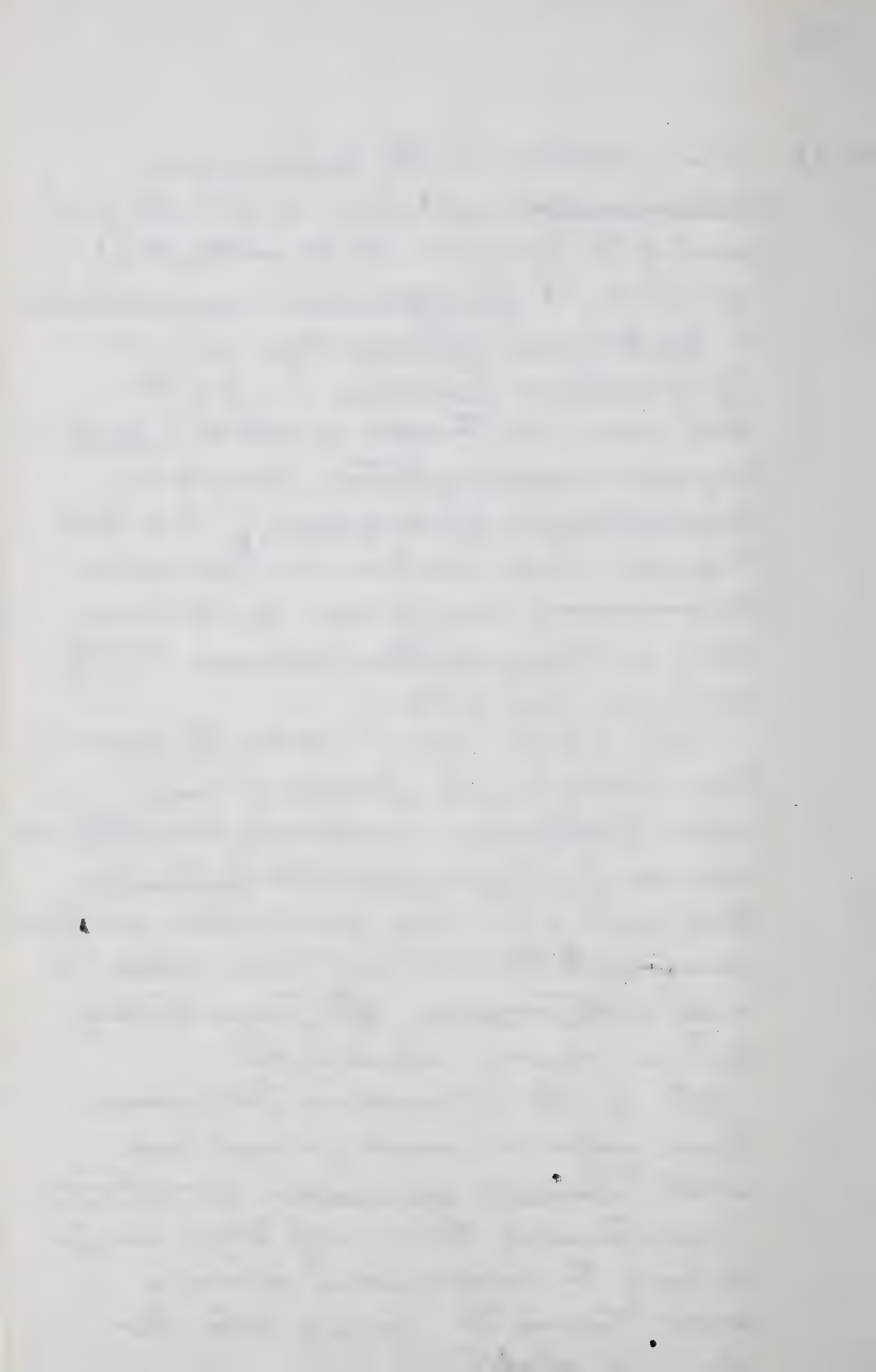
rode 1934

June 28

In addition to the Entomias
minimus scrutator caught last night the first
part of the trap line (on the valley floor)
yielded 6 Peromyscus maniculatus
2 Dipodomys lucogrenys and one
Perognathus parvus. On the
hill side the traps yielded 6 Peromyscus
maniculatus and one
Dipodomys lucogrenys. In one
trap on lower portion that I missed in
the morning and found by Palmer
was a Perognathus parvus badly
eaten by ants.

At 1 P.M. I went over the upper
trap line and found in traps,
one Entomias minimus scrutator imm.
and one Callospermophilus lateralis
this part of the line was on the northwest
facing hillside in Piñon pine
and Artemisia the traps being
set in open clear spots.

At 6 P.M. I checked this same
line again and found one
adult Entomias minimus scrutator.
I continued the line of traps up to
the top of the ridge and down a
draw toward the camp site. No
change in plant life.



Brode 1934

June 29

In the early morning check on the old portion of the trap line (13 traps) only one Peromyscus maniculatus was found. The extension of the line (set last night) yielded ~~two~~, one at about 7450 ft elevation and one at 7600 ft. elevation; 1 Dipodomys ²lucogenys and nine Peromyscus maniculatus half of these were immature. Total traps set out 52; traps with specimens 12; Traps sprung 5; Traps not sprung but with bait missing 5. Large numbers of ants were along the trail and on some specimens there were red and black (large) ants and on some specimens there was a smaller ant that was a uniform light amber color.

At 4 PM went by car with Hall and Palmer by road north and west into Mason Valley. The first collecting station was in an area at Mason Valley 12 mi. E. of Wellington, Lyon Co., ^{Nevo} 5000 ft. Here I set out 48 traps in Atriplex, Sarcobatus, and a species of Chrysothamnus. I took a horned toad while setting traps and a whiptailed lizard was seen.

B mode 1934

June 29 cont.

The second station was an area in Mason Valley 5 miles north of Pine Grove 5300 ft., Mineral Co., Nevada. Here I set out 32 traps in similar habitat as in 1st station.

June 30 4:30 A.M. we set out again to the stations above at the point 12 mi. E. of Wellington, 5000 ft., Lyon Co., Nevada. I took four Dipodomys microps levipes and 13 Perognathus parvirostris ^{out of 48 traps, 17 caught, 8 of these were tripped} ^{5 mi. N. Pine Grove}. At the second station, as at top of page, ~~we~~ I took one Dipodomys microps levipes and seven Perognathus longimembris panamintinus.

32 traps were set; eight had specimens; 5 were sprung but had no specimens altho ~~two~~ showed struggle, 4 had bait taken but were not sprung.

ants were present in two cases but not in others. One trap had a tail in it and the next trap had a mouse without a tail.

Worked putting up specimens and writing up notes. Did not put out traps in P.M..

July 1 We packed and were ready to move by 9 A.M. We took a north leading

Brooks

1934

July 1 continued.

road down into Mason Valley to the state highway at a school house, about 15 mi. At the school house we turned to the west to the West Walker River. We followed the north bank of this river into a gorge ~~through~~ which it flows from the Smith Valley into the Mason Valley. We stopped in this gorge at a point 12 mi., S Yerington, 4600 ft., W. Walker R., Lyon Co., Nevada. This site is on the river and at this place there are a number of irrigation canals leaving the stream proper. The river is ^{boarded} lined with cottonwoods and willows which quickly runs out a short distance from the stream into Chrysothamnus, ^{Lepargyrea}, and near desert brushes. The valley is funnel-shape at this point. As the valley narrows the sides become steeper and higher and are very rocky. In the broader portion of the funnel on the north side there is a ^{deposit} ~~pile~~ of unsegregated boulders, rocks sand and soil, which the river apparently deposited and then later cut its way thru.

Brooks

1934

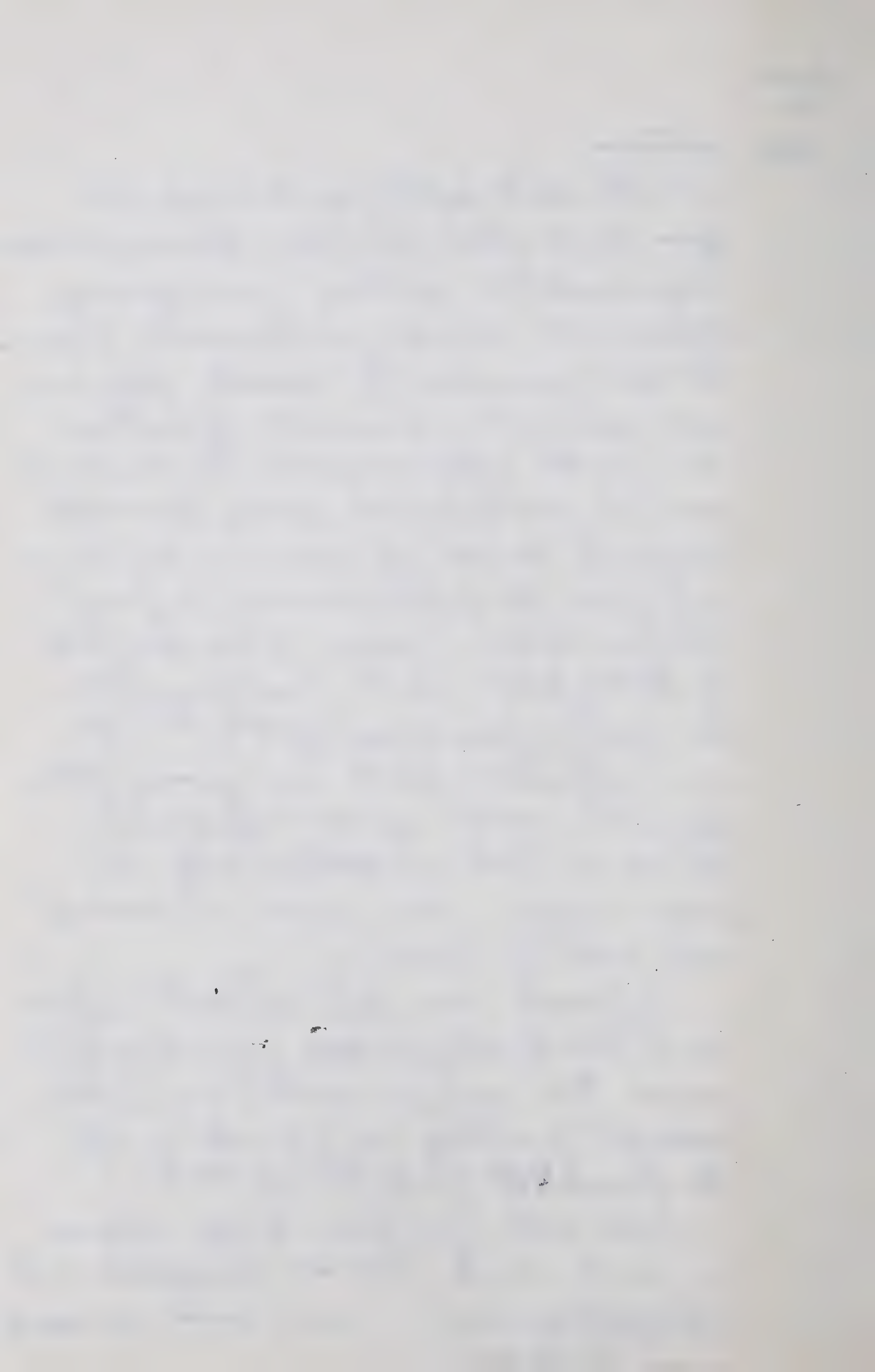
July 1

continued

In the late afternoon I took the gun and attempted to get some birds. I succeeded in getting one young bluebird and a linnet. I saw a large number of linnets fly from one shrub. A number of robins were in the cottonwoods I shot at one and it winged down toward the opposite bank of river but I was not able to determine its final status. Later I saw a large flock of Magpies but I was unable to get close enough to them for an effective shot. A young blue heron went up and down the stream bed occasionally. A song sparrow was seen on a bush, it was shot by Palmer.

I found one Uta stansburiana and two Sceloporus occidentalis near the camp site. The latter sought safety in climbing up the trunk ~~but~~ of a cottonwood.

I set out fifteen traps some in rock-sand between Atriplex and Chrysothamnus and some in sand near the stream.



Birds
1934

July 2

I took up trap line placed last night on the rocky valley floors. There were three Peromyscus truei, in traps.

I shot a willow goldfinch and two ^{Brewer's} black birds. In the case of the blackbirds one was brought down from a flock in flight and the other was one of a flock of twelve in a bush. There were seen two other flocks of black birds one of the flocks being being redwing blackbirds. The directions of flight was to the southwest thru the gorge. There were a large number of linnets in bushes. Several flocks of Magpies were seen in flight. Calls of the chat and the spotted towhee were heard in dense willow thickets near railroad tracks and irrigation ditch.

Spent most of the day putting up bird skins. It was quite sultry and rained several times during the day. Late in the afternoon I took the gun and went down stream. I saw a number of robins, mourning doves, a flicker and shot

July 2
cont.

a Lazula bunting. I crossed the river found a number of small ditches and a pond that looked favorable for frogs and mosquitos. There were no frogs seen but there were ample numbers of mosquitos. There were a number of robins, many of them young, a flicker feeding on ant hill took to the trees on my approach. The "streaming" of magpies up and down the gorge was interesting. They followed closely the ^{south} bank or still side near the upper irrigation canal a few in the lead would light in a cottonwood, those immediately following would proceed on past to the next trees and those following immediately after them would go on to further trees. There seemed ~~no~~ end to the stream. After a time those in the 1st cottonwood would ~~again resume~~ the flight not necessarily with ~~for~~ the end of the line. In an half hour the parade started back over much the same route and varied ~~it~~ some by individuals sometimes



Brode
1934

July 2
cont.

lighting on the ground on the hillside and hoping or longing for a while or some would vary the line of streaming by coming closer to ~~the~~ the river. I shot one of these. Others flew overhead and scolded me for the deed. Three pairs of swallows did much flying about in the mosquito laden air.

Later in the evening a few bats flew over the campsite.

July 3 AM Went out with gun but missed most of my shots. Hit a young robin but could not find it after it volplaned into the brush. Got a green backed gold finch. I saw robins, doves, a flicker, a number of linnets and a jack rabbit.

Very windy today - some dust; blew fly from over work tent and blew down the "chiefs" tent. I worked up two birds and the almost too ripe Peromyscus truei.

In the evening I crossed over to the south side of the river and set out 40 traps. I saw some feces that looked large enough to be racoon.

Brode
1934

July 3 continued
c

It was found on a ledge under an overhanging rock. I again noted the "streaming" of the magpies and shot one. I also shot a mourning dove. I saw a number of robins, flickers, and a blue heron.

July 4

gathered up the traps set out last night on the south side of the river. There were ^{nine} ~~eight~~ specimens in the traps, all Peromyscus maniculatus. They ranged in location from the upper irrigation canal on the south side of the W. Walker River down to and on grassy plots among the cottonwoods by the river. Near the pond to the east of camp (but on the south side of stream) I noted mole workings but they were not recent. I shot at a flicker but missed both when he was on the ground and when he was in the tree. Saw a number of doves robins and at some distance black birds. Shot a ^{western} bluebird on a bush near the upper irrigation canal. I shot at a robin it whirled about and hung head down from the branch for a few seconds and then dropped

Brode
1934

July 4

continued
but before it had gone a yard it
recovered and flew to another tree.
a second shot sent it volplaning
across to irrigation ditches on toward
the hill side. By the time I had man-
aged to cross the streams I could
not find any trace of the bird. I did
find among the rocks of the hillside
a whiptailed lizard, Chenidophorus
Tessellatus.

In the evening I crossed the railroad
tracks and set traps at intervals
from the base to the top of the gravel
hill opposite camp. There are many
boulders and all sizes of rock and
soil very little plant life. Principal
plants: at the base - near irrigation
canal willows - then abruptly
desert-like flora chiefly Atriplex
and Chrysothamnus. I saw definite
signs of wood rat and kangaroo
rat workings.

July 5

Collected traps set out last night.
At the base of the hill ~~I found~~ near
the willows I found a Peromyscus
crinitus and another of the same sort
way up the hill. A short distance up

Brode
1934

July 5
cont.

from the base of the hill were signs of woodrat work. one mouse trap had been dragged to a crack between rocks a distance of four feet. another mouse trap contained a Neotomys lepida. A rat trap contained a Perognathus formosus. ~~Four~~ more of these pocket mice were in mouse traps at various points on up the hillside, and one was found on top. Two Dipodomys microps levipes were found near their workings on flat benches on the hillside and one was found well back on the flat top of the hill.

One Reithrodontomys megalotis was in a trap near the base of the hill.

In a total of 33 traps set, 13 had specimens in them; 8 were tripped; 4 had bait removed but not tripped and 8 were untouched.

Earlier in the morning I took a Peromyscus maniculatus out of a trap 4 ft from my bed.

The rest of the day until 3³⁰ PM I spent preparing skins. At 3⁵⁰ I went with Dr. Hall to Yerington and got hunting

Brooks

1934

July 5 cont.

jacket. The day after the "fourth" was a hard day for many of the Homo sapiens of that town judging from the looks on their faces.

On the return trip we stopped at a farm and set out traps around a pond. There were many blackbirds about the pond including some "redwings", a number of Meadow larks, some Maryland yellow throats and several ~~meadowlark~~ marsh wrens.

On return to camp I went over to the base of the hill on the north again and shot a lazula bunting and a swallow. The swallows seem to be travelling up the "funnel" of the gorge and came pretty low over the hill. I did not retrieve the swallow that evening. I set traps near the wood rat and kangaroo rat workings.

Skinned and fixed a wood rat after supper.

July 6

Up at 4¹⁵. Went to the hill visited last night. Found the swallow.

Brooks
1934

July 6 continued

One trap contained a woodrat; two had Peromyscus crinitus in them. Got no kangaroo rats. Had only seven traps out one was sprung and a rat trap ~~it~~ was still set but empty of bait.

Before breakfast I went with Hall to the farm ~~6 mi.~~ Mason Valley 6 mi., S Yerington, 4500 ft., W. Walker R., Lyon Co., Nevada where we had placed traps the night before. In run ways I found two Reithrodontomys megalotis in traps. Black birds, meadowlarks, Maryland yellow throats, and marsh wrens were abundant. Two terns flew over the pond. There were ~~many~~ signs of water birds about the margin of the ponds especially in the reeds. I shot a marsh wren, ^{which was} in the tall reeds.

We noted many jack rabbits along the road. One ran a head of us for some distance the rabbit barely kept a head of the car going at a speed of 25 miles per hour. We saw a number of Sparrow hawks, mowing

Brooks
1934
July 6

continued

doves, magpies, robins, linnets and blackbird along the road home to camp.

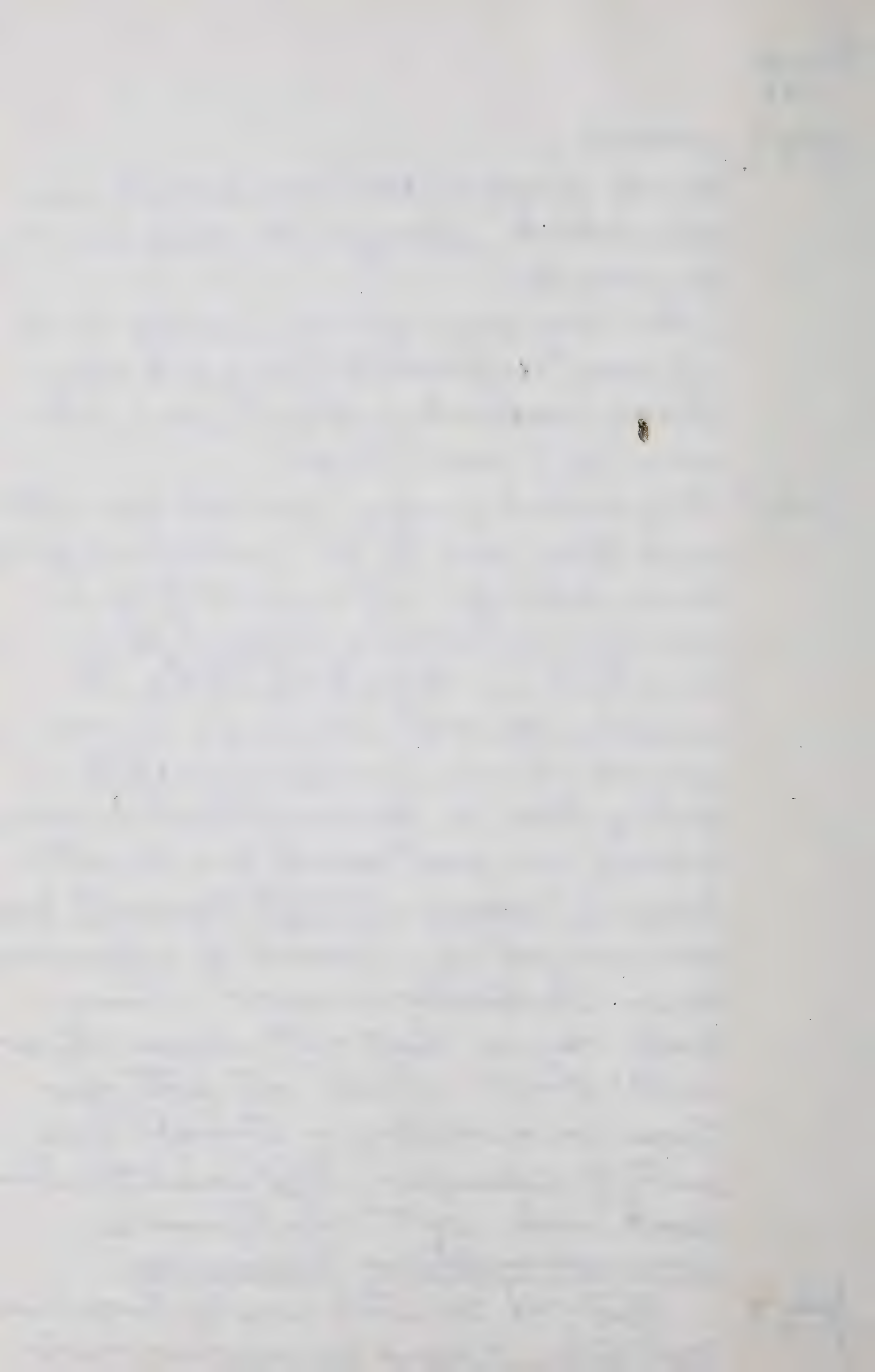
The day was very windy and it was difficult to prepare skins. There was much dust and sand in the air. I set no traps.

July 7

We packed camp, went into Youngtown and then on to the Indian Agency near Schurz. The country is very desolate except for a little ^{farming} irrigation along the Walker River. There is more sand here in this part of the Valley than in Mason Valley. From Schurz we went south to a location 3 mi. S Schurz, 4100 ft., Mineral Co., Nevada. We camped in a grove of cottonwoods near the Walker river. It was quite warm but not excessively so in the shade. I set out forty-two traps in nearly a straight line east of camp. I followed the line back and one trap I found a Ammospermophilus leucurus.

July 8

Gathered the catch from the trap line. Most of the catch was kangaroo rats,



Brooks
1934

July 8
contin.

including 2 Dipodomys microps
levipes and 9 Dipodomys merriami
the ~~former~~ were found well out from
the river and in rather hard
soil with a little sand. There was
one Perognathus longimembris panamrin-
tinus and one Perognathus that
seemed somewhat to favor p. parvus.
I noted a pair of barn swallows
I discovered the nest in a canal
culvert under the railroad track.
Shot the male. I noted fresh
gopher workings near the side
of the now dry irrigation canal.
I saw two ^{blue} herons at fairly close ranges,
some quail, magpies and robins.

The day was fairly warm a slight
breeze made working skins comfortable.
In the ~~evening~~ afternoon I found
an Amorpermophilus leucurus
in a trap left out from the trap
line but it had been out in the
hot sun too long to put up. In
the evening the trap line was re-
set, including two gopher trap
sets. I set out 52 traps.

July 9

Collected traps and found three
Dipodomys merriami and ^{one} Dipodomys

Brode
1934

July 9
contin.

microtus levipes, three Microdipodops
pallidus, one Thomomys bottae
(in the bank of the dry irrigation canal),
two Perognathus longimembris pan-
amintinus, one Onychomys
torridus longicaudus, two Reithro-
donomys megalotis. These
were found in trap line extending
from camp on river out one
and a quarter mile east into the
desert. In coming back to
camp a skull of a coyote and
a skull of a dog were found.
In digging for gopher settings
I found a large Scaphiopus
hammondi about 4 inch below
the surface in moist earth of
the gopher mound. At noon I
went out to the gopher traps found
one gopher and on return to camp
picked up a Sceloporus magister.
In the morning I had set a trap
near camp and it had a Peromyscus
maniculatus in it. ^{and got another gopher from it}
I set 25 traps near camp. While
setting traps I found a Bufo boreas
on the bank of stream. Visited
shore of Walker Lake in late afternoon.

Brooks
1934

July 9
contin.

We saw considerable workings of kangaroo rats, whiptail, and quiddison lizards. I shot one of the latter. We saw several five gulls and flock of large brownish bird which flew in a flock low over the lake. As we went to and from the lake we saw a one point a family of burrowing owls. The lake has no outlet and is somewhat alkali but still supports some water weeds and snails. Old levels of the lake are quite high above the present level. At present very little water is reaching the lake by the Walker River due to demands of irrigation.

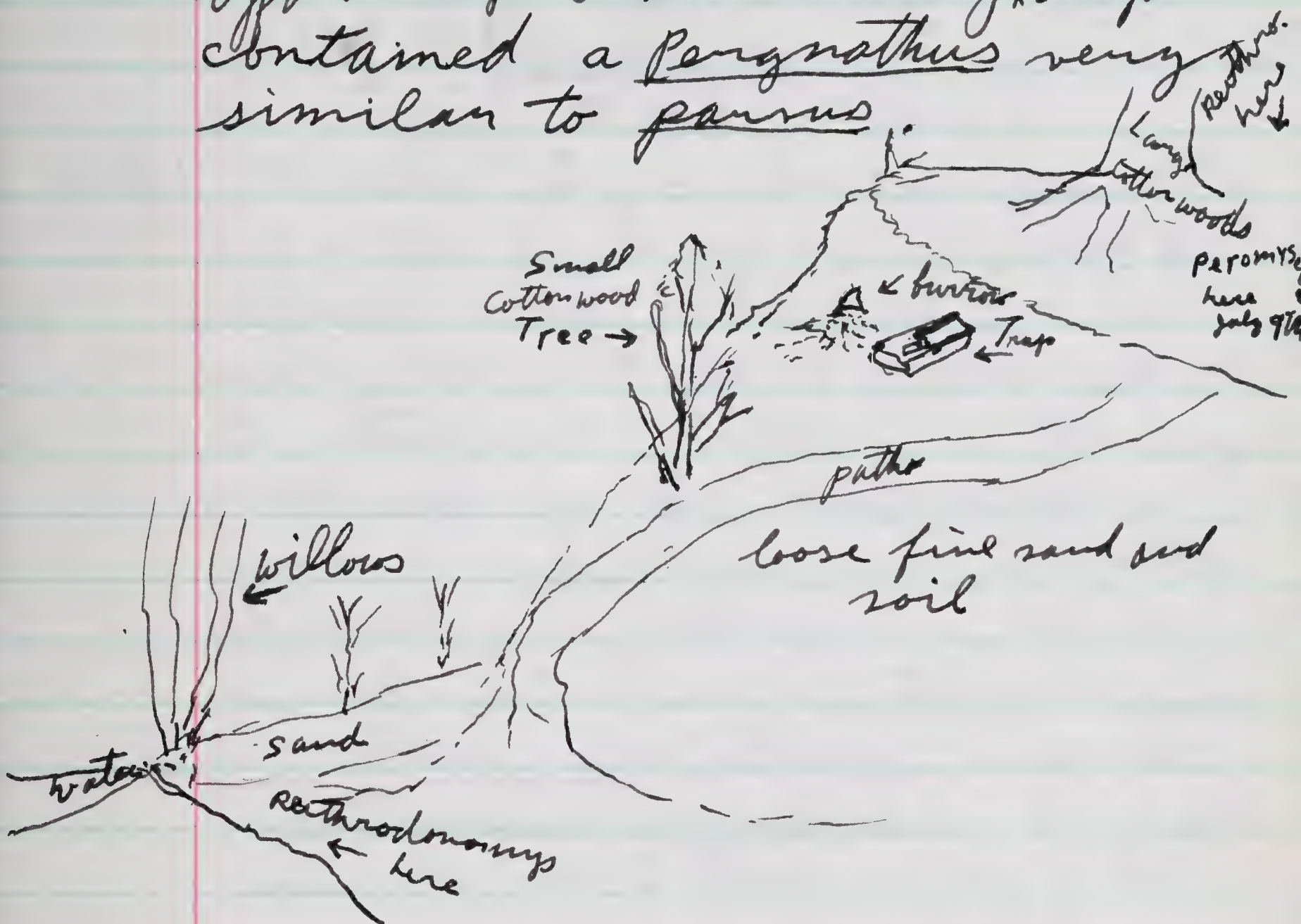
July 10

Collected traps placed near camp last night found two Reithrodontomys megalotis one on the bank of the stream in moist grass and one on ground under cottonwoods near camp. For several days I had watched a small burrow in front of which I had kept a

Brode
1934

July 10
cont.

baited traps twice on previous days
the bait had been taken without setting
off the trap. This morning, ^{the} trap
contained a Perognathus very
similar to parvus.



This specimen is similar to one
found by Dr Hall and ~~to one~~ one
found by myself, both found
on July 8th. My specimen of
July 10th I gave to Hall whose number
it is 4192.

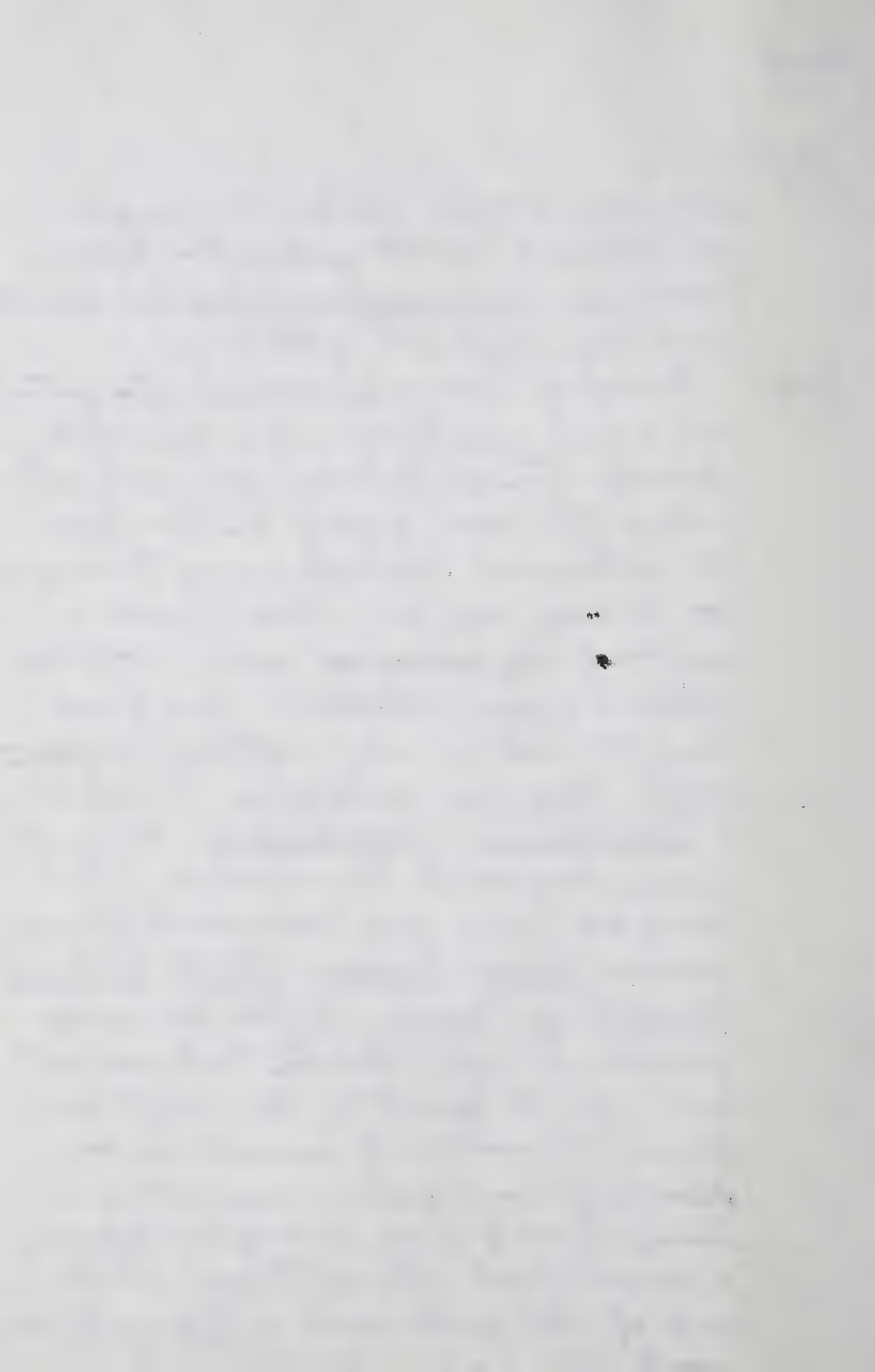
After lunch I visited gopher
traps (set out this a.m.) and found
one gopher, and set 3 more
sets of traps, followed several

Brode
1934

July 10 cont.

burrows 6 to 10 feet. Visited them again but without results just before supper. Found an Ammospermophilus "parboiled" in a trap left out yesterday.

July 11 Moving day - packed up. after putting up a few gophers - proceeded to Schurz. From Schurz we went south along the west side of Walker lake to Cottonwood Cañon and up this canyon. on the way up this steep grade a number of lizards were seen, including collared lizard, whiptails, and fence lizards. At a rock in Cottonwood Cañon 5100ft., Mineral Co. Nevada I caught a Sceloporus occidentalis. We made camp beyond the headwaters of this canyon near an abandoned placer mine in Japon Cañon, 8900ft., Mt. Grant, Mineral Co., Nevada. After the camp had been set up, Hall took me with him up Mt. Grant to the 10,000 ft. level. We saw a number of horned larks, sparrows and juncos as well as a large bird of prey being harassed by a small bird. We set traps at the end of the auto road on SW slope Mt. Grant, 10000ft., Mineral Co., Nevada and returned to camp.



Brode
1934

July 12

This region abounds in Artemisa, up above camp are several groves of Mountain Mahogany and in the draws are marshy meadows much overgrazed. These meadows have a number of clumps of Luzula, Mimulus, sashes, and grass. They are covered with "hummocks" made by the sheep and cattle tramping in the wet meadow. We noted an abundance of gopher workings.

Before breakfast I shot a small sparrow Spizella breweri. After breakfast I went with Hall again. We stopped in a meadow on Cat Creek, 8900 ft., Mt. Grant, Mineral Co. Nevada. to set five sets of traps for gophers. Then we proceeded up to the 10,000 ft. level on Mt. Grant where we gathered in our trap lines. I had nine Peromyscus maniculatus and three Perognathus parvus in 12 of 25 sets. After this we went on up to the top of Mt. Grant, 11,303 ft. The view from the top was very fine. The Sierras showed for miles to the west and southwest. Below to the east lay Walker Lake and to the southeast Hawthorne and the Naval ammunition depot. The topogra-

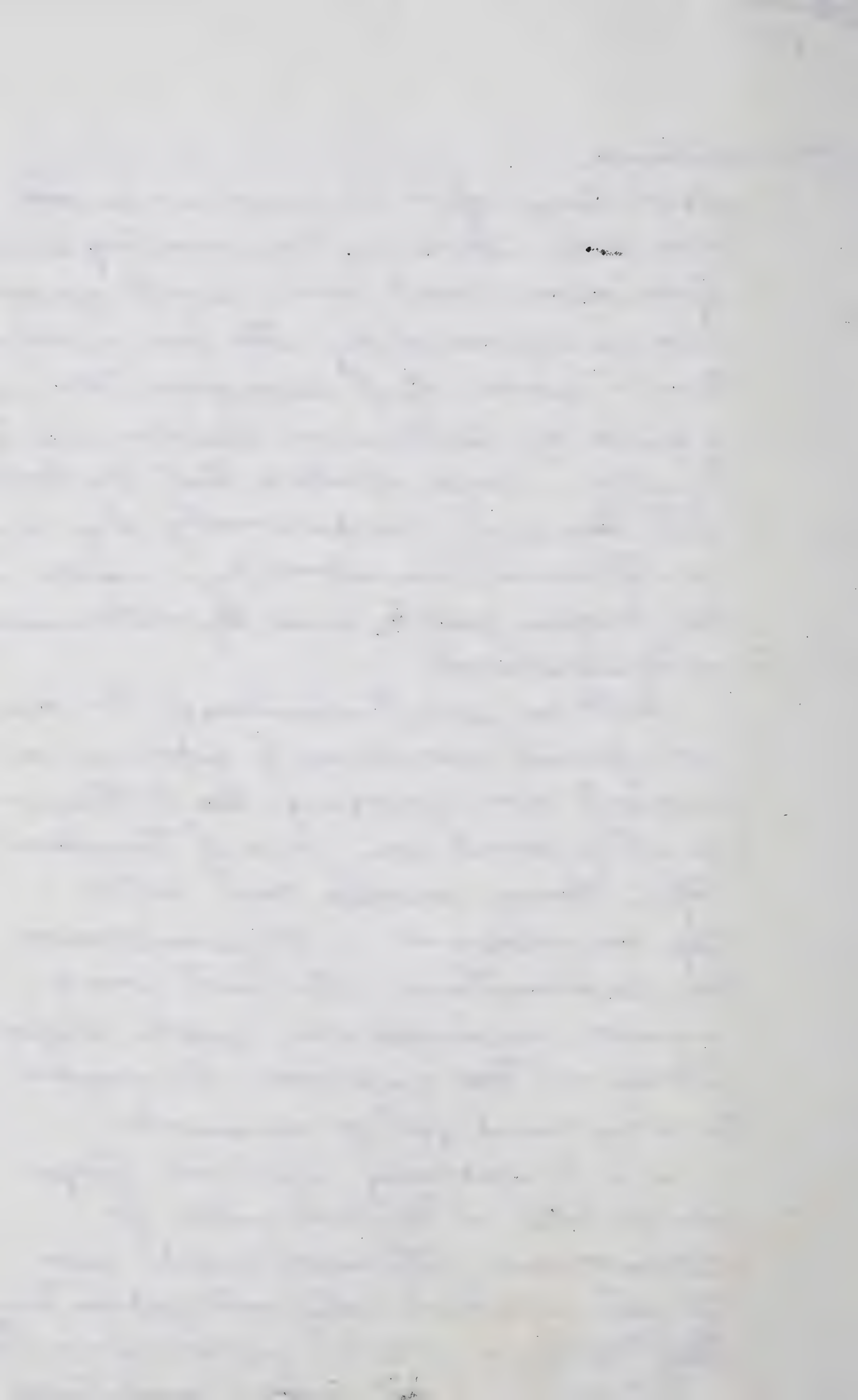
J. Beards
1934

July 12 continued

phy lay before us much as a ~~air-~~^{air-} view map. Showing the country we had been over and soon would go over. One is impressed by the bare peaks, then a "zone" of Piñon pine, then a zone of Artemisia blending into the Piñon, and below that the desert. All this cut occasionally by canyons or streams bordered by aspens in the higher parts and by Cottonwoods in the lowlands.

With in 200 ft elevation of the top we found workings of gophers and signs of over grazing. Dr. Hall saw a chipmunk on one of the rocks on top. Many insects are on the top meadows. We went down the mountain to Cat Creek meadow rechecked our gopher traps taking out ~~two~~ gophers. Proceeded to camp and put up animals.

In the evening I set out traps on the hill at the head waters of Cat Creek and Cottonwood creek near the site at which we had gopher traps. Hall took in several gophers from these traps. Set out 5 sets of gopher traps near camp in Sapon Cañon.



Brooks
1934

July 13 Friday the thirteenth. From traps on hillside Eat Creek 8900ft., Mt. Grant Mineral Co., Nevada, thirteen Peromyscus maniculatus and one Perognathus parvus and from the gopher traps in the Eat Creek Meadow one specimen of Thomomys quadratus.

From traps set near camp in Japon Cañon I took out during the day five Thomomys quadratus. Set traps for Microtus etc in evening.
July 14 a section of boggy ground near the placer mine in Japon Cañon was extensively cross-crossed with trails noticeably containing Microtus droppings and pieces of cut grass. The runways were for the most part in quite moist ground. I placed the traps in the runways but got only two Microtus ^{+ montanus}. In mouse traps away from the bog I caught two Peromyscus maniculatus and in the reset gopher traps I found two Thomomys quadratus.

In the afternoon we moved down the mountain to Cottonwood Creek 7500ft. Mt. Grant, Mineral Co., Nevada. In the evening I went ~~up~~ Cottonwood Creek [?] 900ft.

Brooks
1934

July 14
cont.

where I set out mouse traps up one side of the canyon into the pinyons and down to the creek and up the rock slide on the east side of the creek and down into the creek bed again. Then ^{walked} down stream an easy mile to camp.

July 15

I went up stream again with Hall. I found a young Neotoma cinerea in a cabin at Cottonwood Creek, 7900 ft. Mt. Grant, Mineral Co., Nevada. I found near by on the trapline set out last night. 11 Peromyscus maniculatus among rocks, among sage brush, and near the stream. In one trap on the margin of the stream was a small Bufo boreas.

While watching for the birds recover from my intrusion a noticed a light brown animal about a foot or so long dodge across the river bottom. It had ~~all~~ the "flash" symptoms of being a weasel. At this location a few feet further down stream I shot some birds - two flycatchers # 418, # 419, three juncos. one male, one female and one young with a short tail.

A quarter mile farther down stream,

Brooks
1434

July 15
cont.

Cottonwood Creek, 7700 ft., Mt. Grant, Mineral Co. Nev.
I shot two more flycatchers, a Western
Tanager and a Hermit Thrush.
Near this place I got a young fence lizard
Sceloporus.

In the evening I went up stream
again and placed a trap for weasel
near where I had seen an animal
cross the river bed. On the way back
to camp I tried a number of shots
at bat which were abundant I shot
one but it came down ^{behind} a clump
of willows and in the twilight I could
not locate it. I did locate some gopher digging.

July 16

I went up to the weasel trap but
I had not been disturbed tho I had
hung a birds body with a little
scent from the anal glands of
a weasel rubbed on the bait. I left
the trap set. Then went down stream
near a mine tunnel near which
I shot a Callospermophilus lateralis
and an Eutamias quadrivittatus. Near
the mine entrance I saw two small
gray chipmunks probably young
of E. quadrivittatus. I shot a hermit
thrush, Hylocichla guttata.

In the evening I again visit and

Broad
1934

July 16 took up the weasel trap. Coming down
out. stream I took by gun a flycatcher
and a Bush-tit the latter from a flock
of at least fifty that "streamed" back and
forth thru the pñons very little
effected by gun fire.

I set two sets for gophers
and attempted in vain to get some
bats again as twilight settled down.

July 17 I visited the gopher sets found one
gopher, ^{*Thomomys talpoides*} and took up the sets. Killed
a young cottontail rabbit.

Our camp site here is in about
the middle of the Piñon belt. The
Cottonwoods of the lower canyon are
here replaced by Aspens with
some willows and occasional
cherry along the streams.

Further away from the stream are
sagebrush (*Artemisia*), *Sambucus*
Kibes, *Chrysothamnus*. Of the smaller
plants most of them had recently been
browsed off by sheep whose signs
and tracks were everywhere. However
in the shade of the aspens there were
wild lilies and yellow Mimulus and
gnomes. Early in the day we pre-
pared to move.

Brood
1934

July 17
cont.

We went down Cottonwood Creek to Wheeler Pass. Up and down steep grades of Wheeler Pass and then S.W. to Morgans Ranch, thru a section of the hottest and most desolate country I have yet seen at an elevation of 5700 — ft. we left the pines and at 5300 ft we left the sage brush gradually for Atropis and Sarcobatus. The geology of the region was interesting.

At Morgans Ranch we were on the East Walker River, we continued north down this river to a point E. Walker R., 5050 ft., 2 mi. NW Morgans Ranch, Mineral Co., Nevada, where we again set up camp. The ^{East} Walker River afforded the comfort of a bath and the shade of the cottonwoods gave us relief from a hot sun and wind. But Oh! those ants!!

In the evening I ran a line of traps upstream 300 yards and then across an old alfalfa field (now mostly Russian thistle) past a school house and southwest to the top of a small hill with Atropis and Sarcobatus

Brooks

1934

July 18

I gathered up my traps - finding very few animals near camp the 10 traps set near the river yielded one Reithrodonomys megalotis and one Peromyscus maniculatus.

In the pasture, once in alfalfa, I got two Peromyscus maniculatus and shot two horned larks and a young Piñon Jay. In the rocks and Atriplex I found a Perognathus longimembris panamintinus, that a big catch out of 24 traps set. In returning to camp I noted signs and nest of woodrats. Palmer and I went up to Mangano Ranch and set out gopher traps. I noted more mole workings than gophers. During the midday I put up skins. In the evening Palmer and I visited our gopher sets and found only one Thomomys bottae. On the way back I stopped off and set out 50 traps on the rock strewn rolling table land. Including some rat traps where I had noted signs this morning. Set some traps where the rock was quite red - wonder whether the color of the mice will match. Found 2 Phomozoma platyrhinos while setting traps

Brode
1934

July 19

In the fifty traps set last night I had only four specimens one young and one adult Neotoma lepida, one Peromyscus maniculatus in a trap on top of a large rock, and one Perognathus longimembris panamintinus.

In the gopher traps at Morgans Ranch, 5100 ft., E. Walker R. Mineral Co., Nevada I had one specimen. Palmer had two gophers in his traps there, which with the one I got there last night makes 4 specimens of Thomomys bottae from that locality.

Late in the evening I set out three sets for gophers near camp.

July 20

Found one gopher in one set only, Thomomys bottae.

Morning day packed and moved early. Stopped at Yerington, and then went on to Fallon where I left the party and returned to Berkeley. Having had a pleasant, and profitable field trip.

Stanley Brode
July 20th 1934

Species Accounts

Brode 1934

Callospermophilus lateralis

2 mi. SW Pine Grove, 7250 ft., Mineral Co. Nevada

June 28 one specimen caught on northwest facing hillside on an open spot near a burrow. Specimen not fully adult.

July 16 Cottonwood Creek, 7700 ft., Mt Grant, Mineral Co., Nevada
shot a specimen that was crossing a rock slide on the side of the valley.
He had a piñon nut in one pouch.

Brooks
1934

Ammospermophilus leucurus

- July 7 3 mi. S Schurz, 4100 ft., Mineral Co., Nevada
caught one in rat trap at about 5³⁰ PM
It was on a small sandy knoll or
mound with a number of burrows
about the base of an Atriplex.
- July 8 I found another specimen
in traps that I had left out but
it had been in the sun too
long and could not be used.
The trap was at the same mound
as of July 7th.
- July 10 Found another specimen in traps
but it was beyond preservation.

Brode
1934

Entomias minimus scrutator

June 27 2 mi. SW Pine Grove, 7250 ft., Mineral Co., Nev.

One specimen caught in trap between 5 P.M. and 6 P.M. in valley near piñon pines and artemisia.

June 28 One specimen, immature, found in trap at 1 P.M. on northwest facing hillside on an open cleared area.

At 6 30 P.M. an adult specimen was taken from trap line on northwest facing hillside near piñon pines.

Brook 1934

Eutamias quadrivittatus

Cottonwood Creek 7700 ft. ^{which was} Mt. Grant, Mineral Co., Nevada
July 16 Shot one specimen at the base of a
rock slide. near by at the entrance
to a mine tunnel I saw but did not
shoot two gray chipmunks probably
young of E. quadrivittatus. They were
difficult to follow against the rocks.

Brooks 1934

Dipodomys leucogonys

June 28

2 mi. S W Pine Grove, 7250 ft., Mineral Co., Nevada

Three specimens were found in traps
two in the valley and one on the
hill side all among Artemisia
and Piñon pine.

June 29 Two specimens caught one
at 7450 ft and one at 7600 ft
on northwest facing hillside

Brooks 1934

Dipodomys microps levipes

June 30 Mason Valley, 12 mi E Wellington 5000 ft., Lyon Co. Nev.
Four specimens were in traps
set in Atriplex and Sarcobatus
in a desert like area. Numerous
trails and burrows were noted.

Mason Valley, 5 mi. N Pine Grove,
5300 ft., Mineral Co., Nevada

One specimen was found in
habitat similar to those above.

July 5 12 mi. S Yerington, 4600 ft., Lyon Co. Nevada

On a rock and boulder strewn
hillside on the north side of W. Walker
river at the east mouth of the
gorge two specimens were found
near their workings and one
more was found ^{on the flat} top of the hill
near workings.

July 8 3 mi. S Schurz, 4100 ft., Mineral Co., Nevada

Two specimens were found not far from
camp in the Atriplex

July 9 Collected an additional specimen
in same trap line used July 8.

Brode
1934

Dipodomys merriamii

- July 8 3 mi., S Schurz, 4100 ft., Mineral Co., Nevada
Nine specimens were in the trap line results. They were taken in the flat open country and on the banks of washes and irrigation canals (dry).
- July 9 Collected three more specimens from the same trap line as used on July 8. in Sarcobatus and Atriplex. The run ways fan out from the burrows and the tail marks gives a good idea of their travels.

Microdipodops pallidus

3 mi. S Schurz, 4100 ft. Mineral Co. Nevada

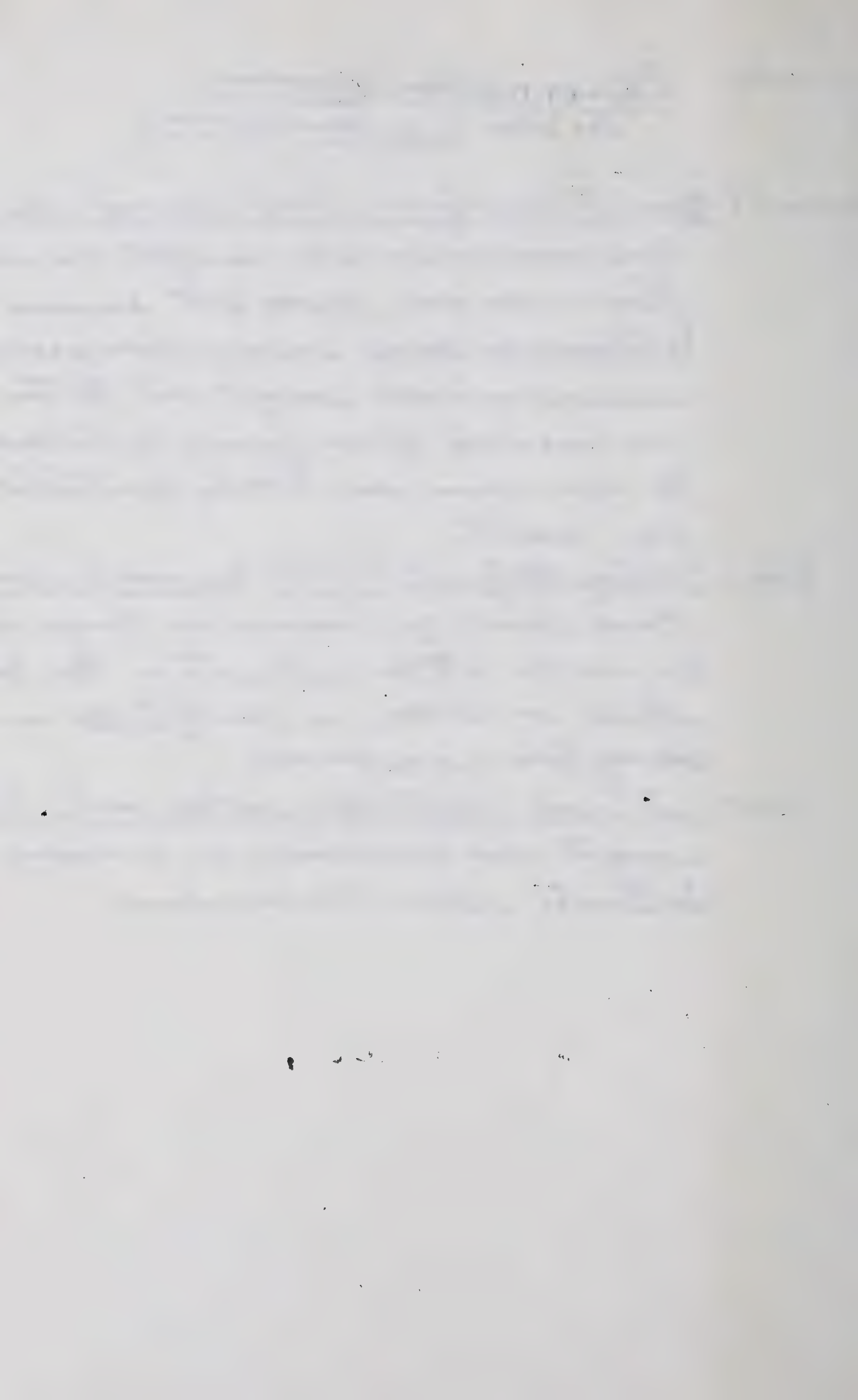
July 9 Found three specimens in traps set in sand mounds among Sarcobatus and some Atriplex.

Brode 1934

Perognathus parvus

See also Perognathus (parvus?)

- June 28 2 mi SW Pine Grove, 7250 ft., Mineral Co., Nevada.
One specimen was caught one valley floor on an open spot among Artemisia ~~sage~~ and piñon pine. a second one was caught but the trap was missed. when found by Palmer the specimen was badly mutilated by ants.
- July 12 SW Slope Mt. Grant, 10,000 ft. Mineral Co., Nevada
I had three specimens in traps among the rocks at this elevation. No large shrubs or trees; a kind of Ribes and very low sagebrush.
- July 13 Cat Creek, 8900 ft., Mt. Grant, Mineral Co., Nevada
caught one specimen on a rocky hillside above the meadow.



Brooks
1934

Pergnotherus (parvus?)

- July 8 3 mi. S Schurz, 4100 ft., Mineral Co., Nevada
~~min. in mine in mine in mine in mine~~
Found one specimen which strongly favors the montane P. parvus. It was in a trap I had placed on the sand of the bottom of an irrigation canal now dry.
- July 10 A trap in camp placed near a burrow had been robbed of bait for several days but today had another specimen of a Pergnotherus near to parvus. It was caught on a dirt bank (4 ft from the top of a 12 ft bank) see sketch in Itinerary notes. I gave the specimen to Dr. Hall whose number 4192 it now is.

Brooks 1934

Perognathus longimembris
panamintinus

June 30 Mason Valley 12 mi. E Wellington 5000 ft., Lyon Co. Nevada.

Thirteen specimens were taken from traps set in a desert like habitat. the plants were principally Atriplex, Sarcobatus and a species of Chryso-
thamnus. The specimens were so small that ~~at least~~ five were caught by tail only and one by its ^{hind} foot.

Mason Valley 5 mi. N Pine Grove, 5300 ft., Mineral Co. Nev.

Seven were taken from traps set in the same plant habitat as above station. In one trap there was a tail in the next trap there was a mouse without a tail. One specimen was badly eaten by ants.

July 8 Took one specimen from trapline about 1/2 mile east of ^{camp on} Walker River. in sandy area.

July 9 Took two specimens from same line of trapping used yesterday

July 18 E. Walker R., 5050 ft., 2 mi NW Morgans Ranch, Mineral Co., Nev.
found one specimen on hillside, above school house, in rocks.

July 19 found an other specimen in a similar location as of yesterday; July 18

Brooks 1934

Pergnathus formosus

July 5

12 mi. S Yerington, 4600 ft., W. Walker R., Lyon Co., Nevada

Four of these were found on a rocky hillside north of the river and railroad tracks and a fifth was found on top of the hill.

Brode
1934

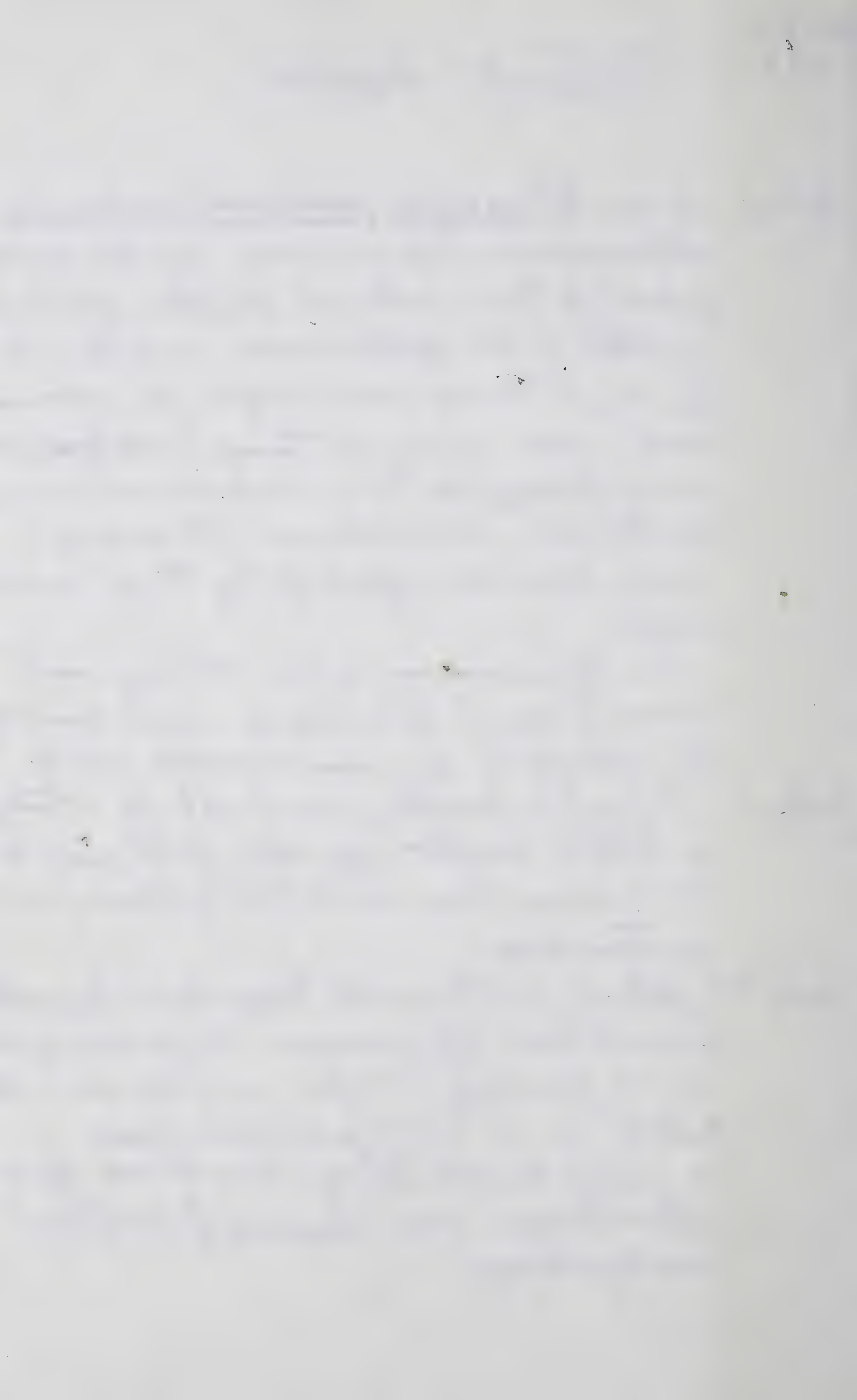
Neotoma lepida

July 5 12 mi., S Yerington, 4600 ft., W. Walker R., Lyon Co., Nev.
obtained one specimen on the lower
part of the rock and boulder hillside
north of the Walker river and the railroad
track. There were signs in abundance
and one mouse trap had been sprung
and dragged to a narrow crack
between boulders. It may
have been scraped off by ~~the~~ a wood
rat.

In the evening when setting out
more traps I located a nest under
the edges of an enormous rock.

July 6 I found another woodrat in a trap
a little higher up the hill side but
in a similar habitat to those found
yesterday

July 19 E. Walker R., 5050 ft., 2 mi. NW Morgans Ranch, Mineral Co., Nev.
found two specimens. A young one
in a mouse trap in a draw. An
adult in a ^{nest} trap placed near
a nest under large boulders. Four
other traps were cleaned of bait but
unsprung.



Brode
1934

Neotoma cinerea

July 15 ~~mineral Co. Nevada~~ Cottonwood Creek, 7900 ft., Mt. Grant, Mineral Co. Nevada
Caught a young specimen in a cabin.
The juvenile does not have as bushy a tail as the adult. The ears are especially large.

Onychomys torridus longicaudus

~~3 mi. S. Schurz~~, 4100 ft., Mineral Co., Nevada

July 9 Caught one specimen in mouse trap
near camp in trap line extending
into Atriplex and sand-gravel desert.

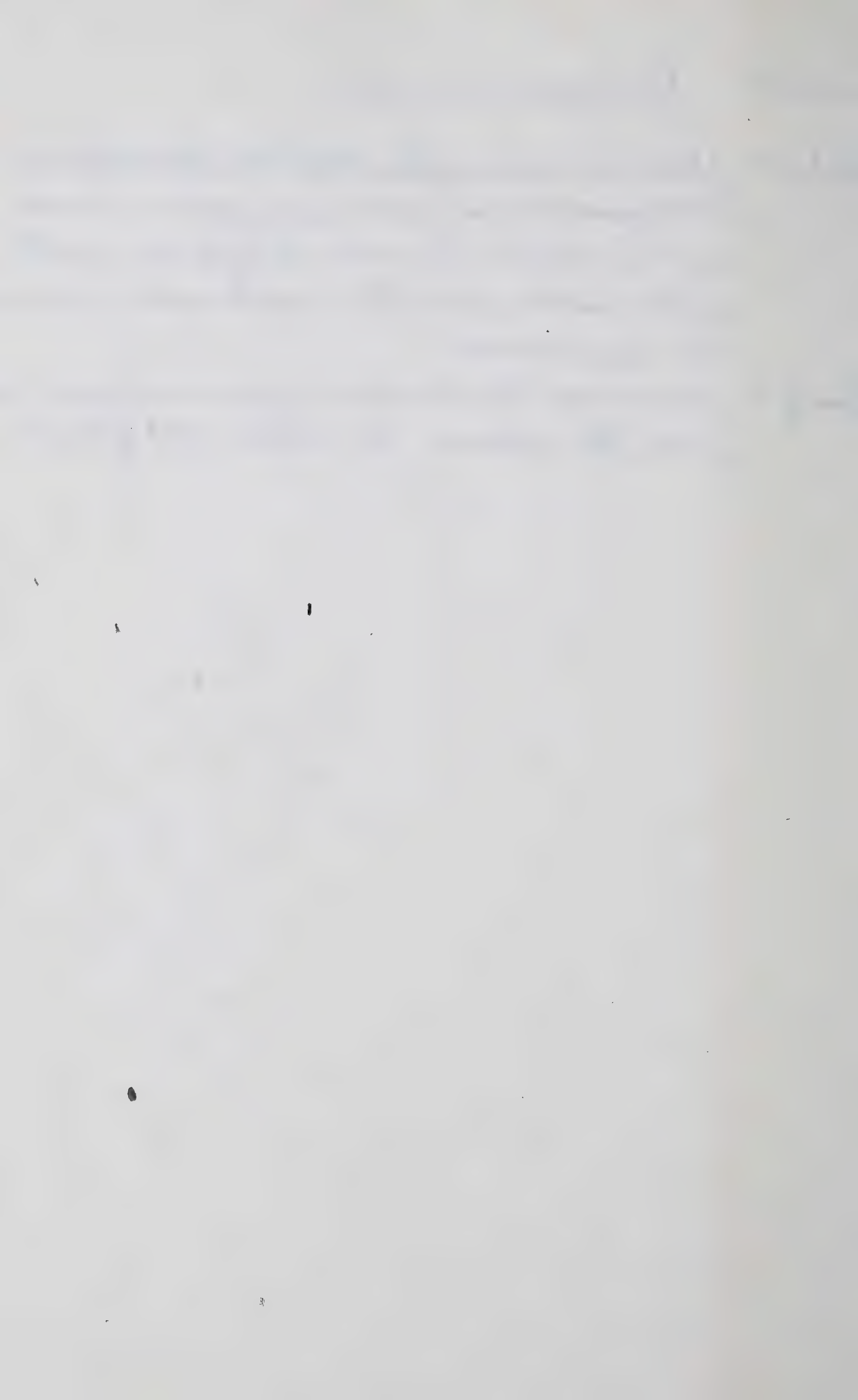
Broad 1934

Peromyscus crinitus

July 5 12 mi., S Yerington, 4600 ft., W. Walker River, Lyon Co., Nev.

These specimens were caught on a rock and boulder strewn hillside north of the river and the railroad. Secured two specimens

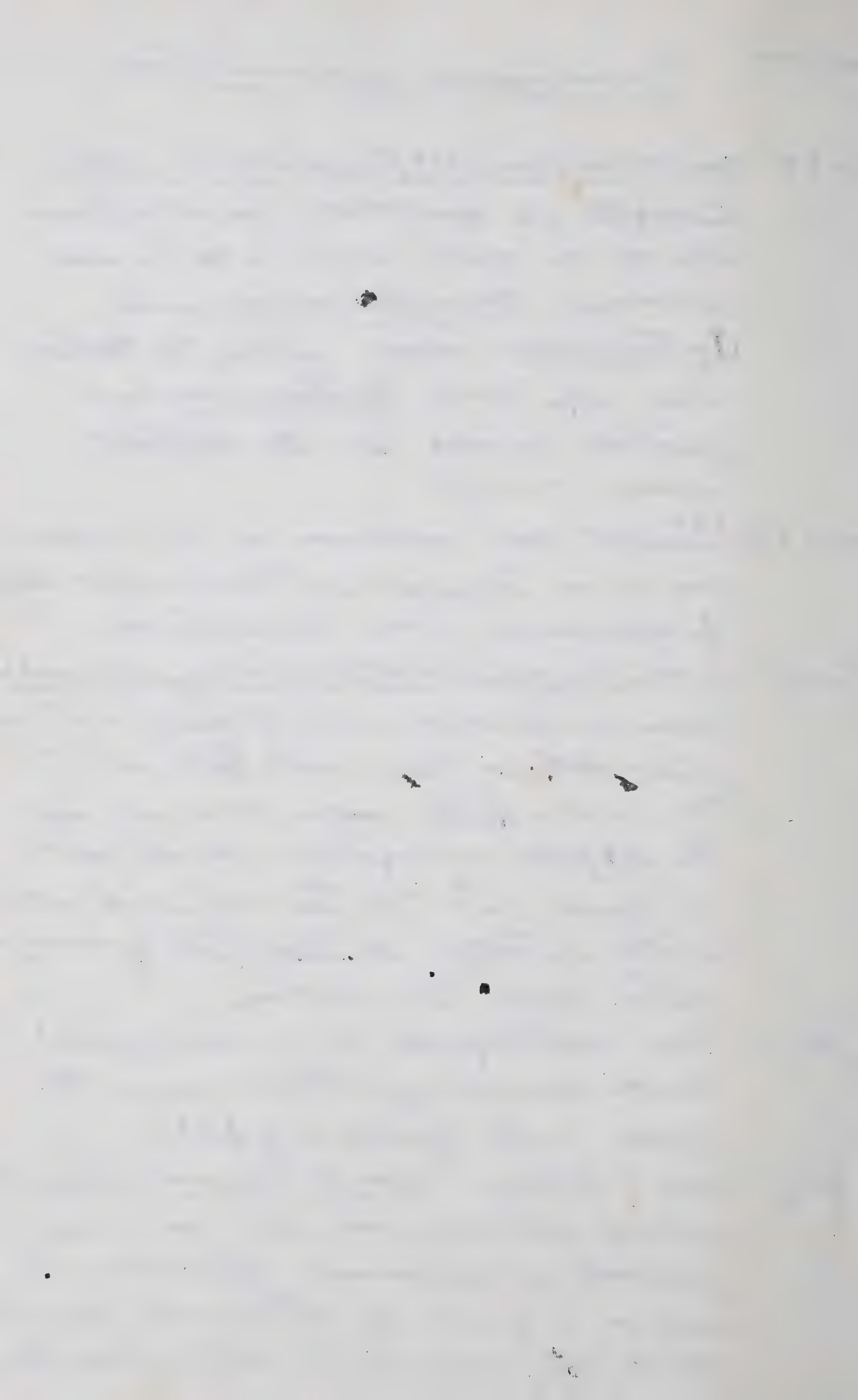
July 6 Secured two more specimens (juvenile) from the same location used July 5.



Brode 1934

Peromyscus maniculatus

- June 28 2 mi SW Pine Grove, 7250 ft., Mineral Co., Nevada
Caught 12 specimens most of traps
being in open areas 2 to 10 wide
among Chrysothamnus and
Artemisia ~~sage~~ along the valley
and up thru Artemisia and
pinon pines on the hillside
above 7450 ft.
- June 29 ^{6 AM}
Caught one specimen in old trapline
and 9 in traps set out last night. Half
of specimens were immature.
- July 4 12 mi. S Yerington, 4600 ft., W. Walker R., Lyon Co., Nevada
nine specimens were taken from traps
placed on the south hillside of
the river bed some were up near
the upper irrigation canal before
it goes into the tunnel and some
were in traps on the flat quarry
plot near the river.
- July 5 One was trapped on a sandy soil
bank among willows near the
river 4 ft. from my bed.
- July 9 3 mi. S Schwarz, 4100 ft., Mineral Co. Nevada
a trap set near my bed in camp
yielded a specimen of this mouse. It
was in a grove of cottonwoods. While this
was the only specimen I collected here others
trapped it in abundance.



B. rode
1934

Peromyscus maniculatus

- July 12 ^{10000 ft} SW slope MT. Grant, Mineral Co., Nevada
Caught nine specimens of this species
among the rocks and short shrubby sage
brush (Artemisia).
- July 13 Cat Creek, 8900 ft., MT. Grant, Mineral Co. Nevada
This was Friday the thirteenth and 13
specimens of this species found their
way into my traps in all sorts
of habitats from ground between
Artemisia, Ribes, Sarcocolla, and Rocks
to the top of a great granite boulder
at least five feet high (had set trap
there hoping to catch a ~~some~~ rock wren
I had seen there).
- July 14 Lapson Cañon, 8900 ft., MT. Grant, Mineral Co., Nevada
Caught two specimens near the
boundaries of the bog near camp,
in Artemisia.
- July 15 Cottonwood Creek, 7900 ft., MT. Grant, Mineral Co. Nevada
from rocky slopes, from among
the Piñon pines and down in the
creek bed I caught altogether eleven
specimens.
- July 18 E. Walker R., 5050 ft., 2 mi. NW Morgans Ranch, Mineral Co., Nev.
found one specimen in cottonwood near
river and two in old alfalfa pasture.
- July 19 found one in trap placed on top of a
large boulder on rocky hillside

Broad 1934

Peromyscus truei

July 2 12 mi. S Yerington, 4600 ft., W. Walker R., Lyon Co., Nev.
Three specimens were found in
trap set in the evening on July 1.
The traps were set on gravel strewn
flood stage river bottom

Brode
1934

Reithrodonomys megalotis

- July 5 12 mi. S Yerington, 4600 ft., W. Walker R., Lyon Co., Nev.
one specimen was found near the base of the north hill not far from the irrigation canal on the north of the railroad tracks on a little patch of sandy soil near some willows.
- July 6 6 mi. S Yerington, 4600 ft., W. Walker R., Lyon Co., Nev.
two specimens were found in run ways near a pond.
- July 9 3 mi. S Schurz, 4100 ft., Mineral Co., Nevada
caught two specimens in the ^{toward} river end of a trap line extending from Walker river east into the desert.
- July 10 In traps placed near camp I collected two specimens, one in damp sand and vegetation near the stream and one on the ground in camp among cottonwoods.
- July 18 E. Walker R., 5050 ft., 2 mi. NW Morgans Ranch Mineral Co., Nev.
found one specimen in trap near river in grove of cottonwoods.

Brooks
1934

Microtus montanus

July 14 Lapson Cañon, 8900 ft., Mt. Grant, Mineral Co. Nevada
caught two specimens in runways
in a grassy bog near placer mine.
Some of the runways showed Microtus
signs and ^{some} had bits of cut grass. Some
of them were in wet ground and
some of were in higher sod. Set 4 traps
but only two Microtus fell victims
in my traps. These specimens were
nearly black. (Specimen of tall grass found
in this bog saved and under date of
March 19, 1935 - identified by D. H. L. Mason
as Poa scabrella - E. H. March 21, 1935)

Brooks
1934

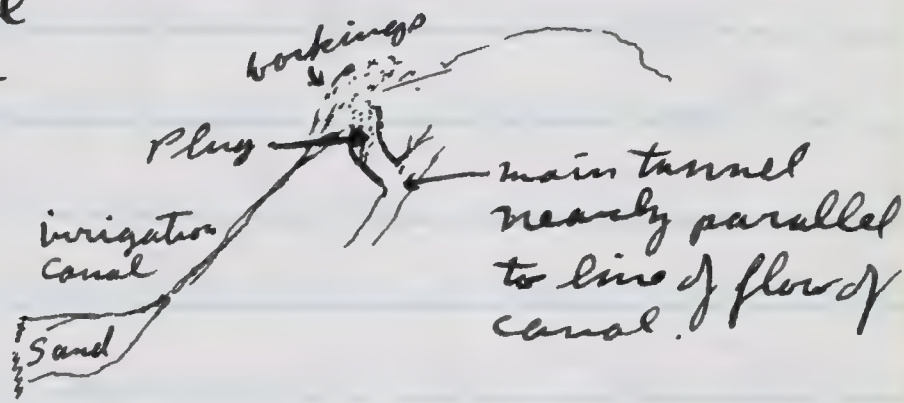
Thomomys bottae

3 mi. S Schurz, 4100 ft., Mineral County Nevada

July 8 noted workings along the now dry irrigation canal and set traps (2 sets)

July 9 ^{AM} one specimen found in the bank of a (dry) irrigation canal

traps had been set in each direction from workings in main tunnel.



Reset traps and set out more.

Found spadefoot toad while digging out one gopher hill.

At Noon found another gopher in trap.

In the evening I again visited the traps and got another gopher.

July 10 Visited gopher trap in the morning found one specimen and made 3 more sets. Further visits during the day failed to yield specimens.

July 18 Morgans Ranch, 5700 ft., E. Walker R., Mineral Co., Nev. found one gopher in 4 sets in alfalfa field.

July 19 found one more specimen in alfalfa field
Palmer found two in his side of the field

July 20 E. Walker R., 5050 ft., 2 mi NW Morgans Ranch, Mineral Co., Nev. found one specimen from three sets in gravel-sandy soil. one other set showed workings but no gopher

Brode
1934

Thomomys quadratus

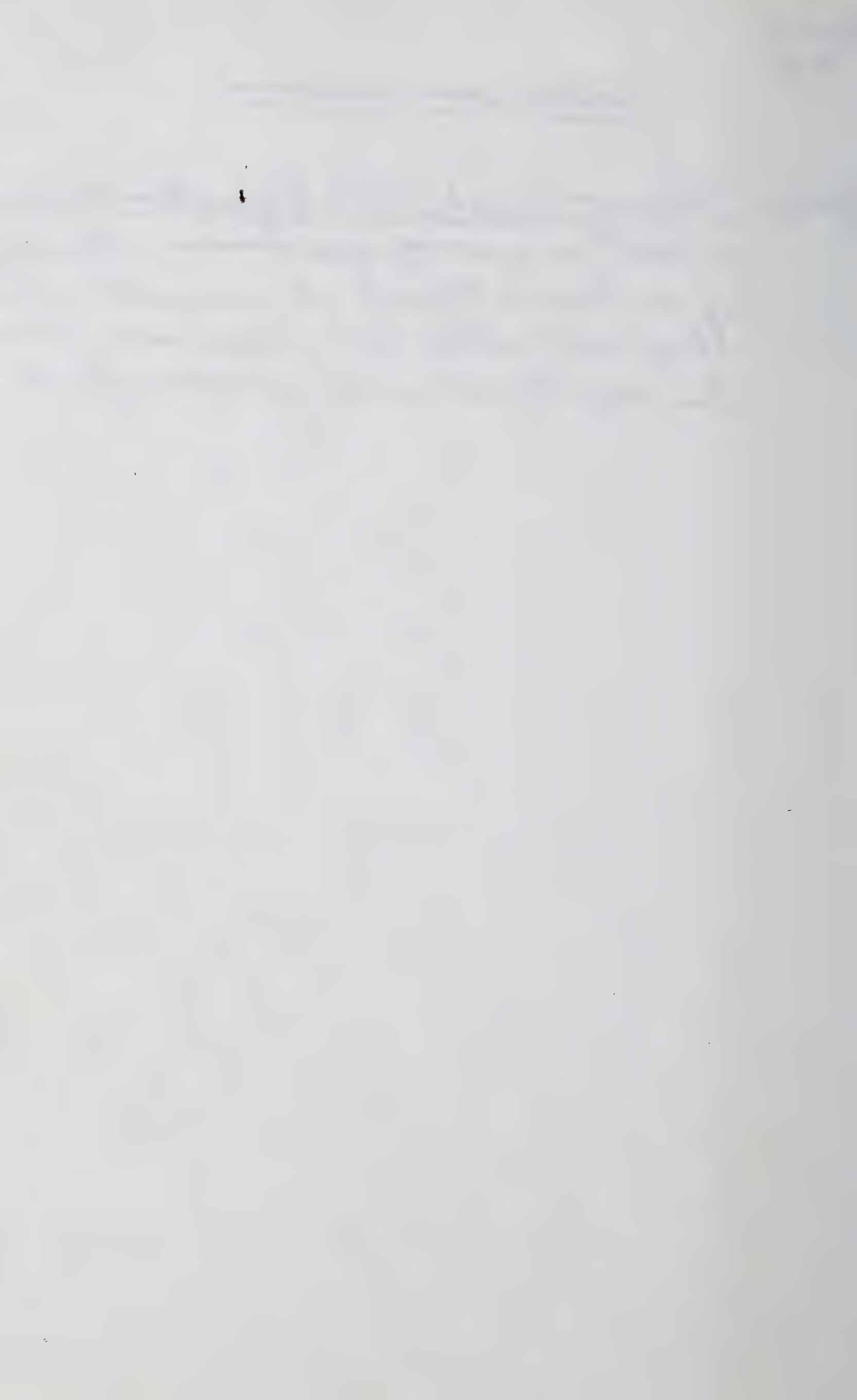
- July 12 Cat Creek, 8900 ft., MT. Grant, Mineral Co. Nevada
^{in A.M.} Traps set by Hall and Brode yielded several gophers at noon and several more at evening.
- July 13 Took one specimen from this locality, a flat mountain meadow very much over grazed. In part of the meadow the soil was soft, in part it was rather hard and covered with sod. In the soft soil the tunnels were large in the sod covered harder soil the tunnels were smaller in diameter. Whether this was due to greater economy of effort in hard soil on part of gopher or whether in soft soil the walls constantly enlarge of their own accord and ~~and~~ the debris so formed removed is an interesting speculation.
- July 13 Lapon Cañon, 8900 ft., MT. Grant, Mineral Co., Nev.
Took five specimens during the day from traps set near camp about a sod covered bog.
- July 14 Took two more specimens from sets in same area used yesterday.
- July 17 Cottonwood Creek, 7700 ft., MT. Grant, Mineral Co., Nev.
Caught a small gopher in moist soil not far from a small spring-green.

Brooks
1934

Sylvilagus auduboni

July 17

Cottonwood Creek, 7700 ft., Mt. Grant, Mineral Co., Nevada
I shot a young specimen at the edge
of a brush thicket it was well protected
by coloration but I had seen it there
the day before and was looking for it.



Oregon:
Umatilla and Klamath Cos.
1934.

Field Notes by
Stanley Bruce
from
~~Aug~~ July 25 to Sept 3rd
1934

Oregon: Umatilla and Klamath Cos.

J.S. Brode
1934

Catalogus

2 mi NW Meacham, 3600 ft. Blue Mts., Umatilla Co. Oregon

July 27 1934

- ✓ 441 ♂ Peromyscus maniculatus 156-72-21-18
✓ 442 ♂ Sciurus 298-135-53-26
✓ 443 ♂ Thomomys quadratus 209-69-26.5-5.5
✓ 444 ^{flashing} ♂ Eutamias 220-98-32.5-17.5
✓ 445 ♀ Thomomys quadratus 182-59-24-5

July 28 1934

- ✓ 446 ♂ Thomomys quadratus 203-58-26.5-5
✓ 447 ♀ Thomomys quadratus 147-33-25-4.5
✓ 448 ♀ Thomomys quadratus 178-52-23-5

Meacham Lake, 3800 ft. Blue Mts., Umatilla Co. Ore.

July 28 1934

- ✓ 449 ? Sorex vagrans 95-42-11.5-5
✓ 450 ? Sorex vagrans 98-43-12-5
✓ 451 ♂ Microtus 171-44-19-13
✓ 452 ♀ Microtus 140-44-18.5-12.5
✓ 453 ♀ Peromyscus maniculatus 178-83-20-18
✓ 454 ♂ Microtus 172-52-19-12
✓ 455 ♀ Microtus 160-43-19-13.5
✓ 456 ♀ Peromyscus maniculatus 157-76-20-17
✓ 457 ♀ Peromyscus maniculatus 134-46-21-16
✓ 458 ♂ Thomomys quadratus 190-58-23.5-6
✓ 459 ♀ Thomomys quadratus 187-56-23.5-5
✓ 460 ♀ Eutamias 225-105-31-19

THEORY

The theory of the present work is based on the following assumptions:

1. The system is in a steady state.
2. The system is in a steady state.
3. The system is in a steady state.
4. The system is in a steady state.
5. The system is in a steady state.
6. The system is in a steady state.
7. The system is in a steady state.
8. The system is in a steady state.
9. The system is in a steady state.
10. The system is in a steady state.

J.S. Broda
1934

1 mi. N. Government Camp 7100 ft., Munson Valley
Crater Lake National Park. Klamath Co., Oregon.

August 23, 1934

✓ 461 ♂ Eutamias 196-74-30-18

✓ 462 ♂ Thomomys mazama 193-67-27-6

✓ 463 ♀ 1 mi. S.E. Government Camp 6500 ft., Munson Valley
Crater Lake National Park. Klamath Co., Oregon.

August 23, 1934

✓ 463 ♀ Marmota flaviventris 650-210-78-15

1/2 mi. N. Government Camp 6700 ft., Munson Valley
Crater Lake National Park. Klamath Co., Oregon.

August 25, 1934

✓ 464 ♀ Microtus richardsoni 207-75-29-15

✓ 465 ♀ Microtus richardsoni 211-75-27-13

1 mi. N. Government Camp 7200 ft., Munson Valley
Crater Lake National Park. Klamath Co., Oregon.

August 25, 1934

✓ 466 Bufo boreas

1/2 mi. N. Government Camp 6700 ft., Munson Valley
Crater Lake National Park. Klamath Co., Oregon.

August 26, 1934

✓ 467 Bufo boreas

✓ 468 Bufo boreas

✓ 469 Rana pretiosa

August 29, 1934

✓ 470 ♂ Zapus montanus 221-142-31.5-15.5

✓ 471 ♂ Zapus montanus 209-125-30-15

J. S. Brode
1934

1/2 mi. N Government Camp 6700 ft., Munson Valley
Crater Lake National Park, Klamath Co., Oregon.

August 29, 1934

✓ 472 ♀ Microtus richardsoni 192-61-26-14

✓ 473 ♀ Peromyscus maniculatus 162-71-19-16

1 mi. N Government Camp 7100 ft., Munson Valley
Crater Lake National Park, Klamath Co. Oregon.

Sept. 2, 1934

✓ 474 ♂ Thomomys mazama 196-63-29-6.5

✓ 475 ♀ Thomomys mazama 179-57-26-6

✓ 476 ♀ Peromyscus maniculatus 155-69-20-18

1/2 mi. S Government Camp 6000 ft., Munson
Valley, Crater Lake National Park, Klamath Co., Ore.
by donation from Berry Campbell

Sept. 1, 1934

✓ 477 ♂ Neosorex palustris navigator 151-80-20-7 *

✓ 478 ♀ Eutamias mazama 139-14-15-47 *

* measures as given by Campbell on his tags
perhaps the hindfoot and ear should be interpreted

in addition skull only of microtine with #461
which is same as chipmunk in the skull.

J. S. Brode
1934

Itinerary

2 mi NW Meacham, 3600 ft., Blue Mts.,
Umatilla Co., Oregon

July 26

Set 55 traps (mouse) and 8 sets for gophers in Boy Scout Camp grounds a short distance from Emigrant Springs State Park. The area included some second growth timber - (white pine, lodge pole pine, Tamarack, Douglas Fir), in which some of the traps were placed. The larger portion of the area was open covered only with a few low shrubs and willows.

July 27

Found one Peromyscus in a trap placed near an old cabin in a trap and during the day four Eutamias were caught in traps left out but were not in usable condition because extreme heat. I shot one squirrel and from

gopher trap Two Thomomys quadratus were taken. Left 20 traps set out and went to Meacham Lake, 3800 ft., Blue Mts., Umatilla Co., Ore. Set out 50 traps and ten gopher sets saw many bats and a number of toads.

J S Brode
1934

July 27 continued

and a frog while setting traps. Some of the traps were set in Microtus runways in moist boggy grass near the lake some were set in near by woods and some in open clear areas. Gopher set were made near the lake.

July 28 Three Peromyscus were found in traps in the cleared area; Nine Microtus were found in the Microtus runways; Here were also found two Sorex vagrans; In the wooded portion collected later in the morning was an Eutamias. Two Thomomys quadratus were found in the sets. I tried to shoot some gray ground squirrels but failed to bag them, tho I am certain that I hit several, judging from the blood streams leading to their burrow down which they seemed to have tumbled. We then returned to

2 mi. NW Meacham, 3600 ft., Umatilla Co., Ore. where three Thomomys quadratus were taken from sets placed here. Returned to Pendleton, Oregon. Had planned

Brode
1934

July 28^{out} to collect in the desert but the weather was very hot and dry so I went to Walla Walla

July 29 Attempted to locate gopher workings ~~south~~^{east} of Walla Walla travelled 10 miles but failed to locate any fresh workings.

1 mi. N Government Camp, 7100 ft., Munson Valley,
Crater Lake National Park, Klamath Co., Oregon

Aug 22 Put out 14 mouse traps and 6 gopher sets just below, S of camp ground on the rim. ^{gopher and Eutamias} ~~at 1/2 mi N. Gov. Camp~~

Aug 23 I found one Peromyscus maniculatus in mouse trap and one Eutamias _____. In the gopher sets found one Thomomys mazamae and one Callospermophilus c. chrysodemas

Aug 24 With Barry Campbell I set out traps $3\frac{1}{4}$ mile N Government Camp, ⁶⁷⁰⁰ Munson Valley, Crater Lake Nat'l Park, Klamath Co., Ore.

the traps were set in Microtus runways and near water ways my share of the trapping were two Microtus richardsoni ~~afesa one Bufala boreas.~~

Aug 23 Found one Thomomys flaviventris one road way hit by a car.

1 mi SE Government Camp, 6500 ft., Munson Valley,
Crater Lake National Park, Klamath Co., Oregon

Broad

Aug 25 1 mi. N Government Camp, 7200 ft., Munson Valley,
Crater Lake National Park, Klamath Co., Oregon.
found a Bufo bone

Aug 26 1/2 mi. N Government Camp, 6700 ft., Munson Valley
Crater Lake National Park, Klamath Co., Oregon
Found two Bufo bones and two Rana
pretiosa one of the latter excaped.

Aug 29 from traps set by Berry Campbell
we received two Zapus montanus, 3
Peromyscus maniculatus and a
Microtus richardsoni and a Lincoln
sparrow.

1 mi. N Government Camp 7200 ft., Munson
Valley, Crater Lake National Park, Klamath Co., Ore
Sept. 1 Set out 5 gopher sets and three
mouse traps.

Sept 2 Found two Thomomys mazama
in two of 5 sets and one Peromyscus
maniculatus in a rat trap.

Sept. 1 Berry Campbell gave us one
Neosorex palustris navigator and
one Eutamias mazama collected
1/2 mi. N Government Camp, Munson
Valley, Crater Lake National Park Klamath Co.,

Brode
1934

Eutamias

- July 27 2 mi. NW Meacham, 3600 ft Blue Mts, Ariz.
four specimens were caught in traps
during the day but due to heat
the skins were in poor condition. One
flat skin was prepared
- July 28 Meacham Lake, 3800 ft., Blue Mts., Ariz. One
one specimen was caught in
mouse trap in woods 600 yds from
the lake.

Brode
1934

Eutamias

Aug 23 1 mi N Government Camp 7100 ft., Malheur Valley
Crater Lake Natl Park, Klamath Co., Ore.

one specimen caught in mouse trap.
They are very abundant but are
less often seen about the rim area
because of the predominance of
the Golden Mantle Squirrels. I did
notice that in the early morning and
evening hours the chipmunks ~~are~~
are most active and the ground
squirrels less noticeable. Few
people recognize the differences
in these two forms

Brode
1934

Sciurus

July 27 2 mi. NW Meacham, 3600 ft. Humatilla Co., Oregon, Blue Mts.
shot one specimen from its perch
in base of a clump of willows.

Brode
1934

Thomomys quadratus

- July 27 2 mi NW Meacham, 3600 ft., Blue Mts., Umatilla Co., Ore.
Found two in sets in ^{old} road way thru
wooded area.
- July 28 Found three in sets in open clearing
Meacham Lake, 3800 ft., Blue Mts., Umatilla Co., Ore.
- July 28 Found two specimens in sets near
boarder of lake. Workings very
plentiful.

Burke
1934

Thomomys Mazama

Aug

1/2 mi. N Government Camp, 6900 ft. Munson Valley,
Crater Lake National Park, Klamath County, Oregon

one specimen taken in sets

Sept 2 two specimens taken from 2 of 5 sets.
workings are very plentiful about
the rim area.

Brode
1934

Microtus

July 28 Meacham Lake 3800 ft., Blue Mts., Maricopa Co. Ariz.
caught nine in traps places in the
near runways in moist grass and
reed at the margin of the lake.

Quade
1934

Microtus richardsoni

Aug 25 $\frac{1}{2}$ mi. N. Government Camp 6700 ft. Mammoth Valley,
Crater Lake Natl Park, Klamath Co., Oregon
two specimens taken near springs
in runways

Aug 29 one specimen taken near springs.
runways abundant.

Brode
1934

Sorex vagrans

July 28 Maacham Lake 3800 ft., Blue Mts., Montilla Co.
two were caught in traps set for
Microtus near margin of lake.

Buode
1934

Peromyscus

July 27 2 mi NW Meacham, 3600 ft., Blue Mts., Umatilla Co., Ore.
one caught (out of 55 traps) in a burrow
under porch of a cabin.

July 28 Meacham Lake 3800 ft., Blue Mts., Umatilla Co., Ore.
three caught in clear area back
from lake.

Brode
1934

Zapus montanus

Aug 29 $\frac{1}{2}$ mi. N Government Camp, 6700 ft., Munson Valley,
Crater Lake National Park, Klamath Co., Oregon

2 from traps set near location
from which Seth Benson also
took some specimens several
days earlier. Moist ground
a path way under an over
hanging bank

Buode
1934

Neosorex

Munson Valley

Sept 1

1/2 mi. S Government Camp 6000 ft Munson
Valley, Crater Lake National Park, Klamath Co., Ore.
specimen collected and skin prepared
by Barry Campbell. collected
near stream

Good

1934

Eutamias mazama

Sept 1 $\frac{1}{2}$ mi. S Government Camp, 6000 ft., Munson
Valley, Crater Lake National Park, Klamath Co., Ore.
specimen caught and prepared
by Benny Campbell.

Brodie
1934

Peromyscus maniculatus

- Aug 23 1 mi. N Government Camp 7100 ft., Munson Valley,
Crater Lake National Park, Klamath Co., Ore.
one caught in trap near rim area
- Aug 24 1/2 mi N Government Camp 6700 ft., Munson Valley
Crater Lake National Park, Klamath Co., Ore.
one caught in traps set out with
Campbell
- Sept 2 1 mi N Government Camp 7100 ft., Munson Valley
Crater Lake National Park, Klamath Co., Ore.
one caught in near rim area.

